

URBANIZATION MIGRATION AND RURAL CHANGE

A Study of West Bengal

Edited by
BIPLAB DASGUPTA

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Urbanization, Migration and Rural Change
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Preface

Why do some towns grow into metropolises and others do not? Under what conditions do some of the rural settlements gain recognition as towns? What explains the very high concentration of urban population in the primate city in the state of West Bengal, while in Punjab or Kerala the urban population tends to be widely diffused? What role has the colonial experience played in shaping the present pattern of urbanization? Would the experience have been different had the prime factor behind urbanization in West Bengal been the spill-over of agricultural prosperity and not industrialization? Is there a trend towards further concentration of urban population, or is it that a shift away from the metropolises and cities is in evidence? What role can the small and medium towns play in urban development? What are the fiscal and administrative implications of such strategies for urbanization? What role does rural-urban migration play in the demographic growth? Is the migratory process self-adjusting, or is it that migration leads to further migration? How can one combine the concern for urban development with an equal concern for rural development? Is there any conflict between the two? If not, would a pattern of 'urbanization with rural focus' be feasible? What would be the possible impact of more efficient programmes of disaster-management and poverty-alteration in rural areas on urban development? How useful are neoclassical models like those advocated by Lewis or Todaro? Would it not be more in order to look for a more realistic and balanced theory?

These are some of the issues discussed and debated in this collection of papers, whose contributors cover a wide spectrum of disciplines—from Economics, Sociology and Anthropology to Urban Planning and Demography. The majority are economists associated with the Centre for Urban Economic Studies of Calcutta University, and most of the papers included here were originally submitted for annual conferences organised at the Centre.

The unifying feature of these papers is their effort to understand various facets of the process of urbanization in West Bengal. Here, as distinct from the prevailing tendency in the literature, the emphasis is on urbanization patterns, trends and processes at work, while the much-discussed civic problems of the Calcutta Metropolis have been relegated to the background. A major feature of this volume is

its attempt to establish links between urban development and rural change and to avoid consideration of urban issues in isolation from the rural reality and the historical setting.

This volume is a part of a series of studies on urbanization in West Bengal. We are also proposing to bring out a volume on Industrialization and Urban Development, again from the point of view of the state of West Bengal, though here Calcutta would play a more substantial role. The other volumes would be more concerned with the problems of the Calcutta Metropolis, looking at issues relating to infrastructure and civic amenities, planning and some of the key social-cultural-political issues.

For the opinions expressed in various articles the authors concerned are responsible. This collection represents divergent political and social views on contemporary urban West Bengal, again with the idea of encouraging an extensive and lively debate. Urbanization is a relatively unexplored subject in the Indian context, and we are hoping that these volumes, as also others being published by other institutions, centres and groups in other parts of India, would stimulate further research on this from a multi-disciplinary view point.

I am grateful to my colleagues at the Centre for Urban Economic Studies both for contributing papers and also for their help in the editing of this publication. Particular mention must be made of Mr. Pabitra Giri, a former Research Associate and now, a part-time teacher at the Centre, without whose help and constant monitoring of the progress of various stages of publication, this volume would not have been completed in time. I am also thankful to the publisher for sponsoring this series and taking an active interest in the work. Mr. Satya Mukherjee of the Centre for Urban Economic Studies and Mrs. Rita Das of the West Bengal Comprehensive Area Development Corporation should also be thanked for their help in the typing of the manuscript.

Despite efforts to standardize district and town names, it has not been possible to avoid spelling variations in some papers. As the Editor, I alone am responsible for the errors and omissions in the book.

Calcutta

20th December, 1987

Biplab Dasgupta

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URBANIZATION IN WEST BENGAL : AN INTRODUCTION

Biplab Dasgupta

I Introduction

In the discussion on the issues relating to urban planning, seldom enough weightage is given to its link with the rural hinterland. Purely civic issues, such as those relating to provisions of water, solid waste disposal, drainage, sanitation and roads tend to dominate the thinking, while the role of an urban centre as a focal point for regional and rural development is often overlooked. Apart from the fact that such an approach is ahistorical, and ignores the process by which a village becomes a town, it drastically limits the scope of urban planning, and often leads to policies which turn out to be self-defeating in the end. A programme for beautifying a town and for making all the necessary provisions of urban infrastructure for a target urban population is eventually negated by the larger than estimated migration of rural folk who are attracted by such facilities and who, thereby, upset the demographic basis of such programme. Such a programme for urban development, which ignores these implications in terms of widening rural-urban differential and the consequent increasing flow of migrants, is doomed at the start. Urban development, to be effective, has to maintain a certain harmony with development in the rural hinterland.

This study of urbanization deals with West Bengal, as a case study. Here more important than West Bengal is the particular pattern of urbanization it represents—the over-whelming role of the primate city, the wide gap between the former and the other major cities in the region in terms of population size, economic activities and cultural influence, and the predominantly rural character of the other areas in the region—which is distinct from the alternative pattern of decentralized urbanization one sees in Punjab, Harayana, Kerala and some other states in the country. We take the view that this contrasting pattern of urbanization has a great deal to do with the differing land tenure systems, the colonial economic policies pursued by the British, and the course followed in terms of economic development in these two types of areas during the post-independence period.

This paper is divided into the following sections : Section II deals with the definitional and conceptual problems relating to various types of urban areas, while Section III presents a historical account of the evolution of the present pattern of urbanization. In Section IV the present pattern of urbanization is analysed, and in Section V a number of case studies is introduced. Section VI deals with the impact of urbanization on rural areas, and in Section VII the impact of urbanization on urban areas has been considered. In Section VIII we put forward a particular strategy for urbanization, which emphasizes on decentralized urban growth with a rural focus.

II Concepts and Definitions

We begin with the definition of 'urban', since a great deal of the analysis of the urbanization process crucially hinges on how an urban area is defined. The Census definition of an urban area is specific : (i) its population should exceed 5000, (ii) population density should exceed 400 per square kilometre, (iii) more than three-fourth of the workers should be engaged in non-agricultural activities, and (iv) other factors which might induce the Census authorities to declare an area as urban even if the other three criteria have not been met. All these figures are arbitrary, e.g. there is nothing sacrosanct about the figure 5000. There are many countries which adopt a much higher or a much lower population size as the cut-off point for determining an urban area. The Census authorities themselves accept many settlements as 'urban' whose population do not exceed 1000, but which satisfy other criteria and in general exhibit 'urban characteristics'. In contrast, one can find many rural settlements with more than 10000 residents, but the density or occupational criteria have not been satisfied, or are not otherwise displaying urban characteristics.

This, however, poses the question : What are those urban characteristics ? Sukumar Sinha, Joint Director of Census Operations in West Bengal, raises in his paper the pertinent question, how urban are those 'urban areas', when the vast majority do not obtain the minimum of civic facilities usually associated with urban areas in the popular image.¹ Besides, a vast number and proportion of those have not even been given municipal status and continue to be administered by rural panchayets; in 1981 only 95 out of a total of 291 urban areas were municipalized, thus 67% of these were not. However, implicit in this line of argument is the assumption that provision of street lighting, metalled road, drainage, piped water

can be taken as 'urban characteristics'. While this may be true in the case of India, in most developed countries such facilities are available in the rural settlements too. It may be asked whether the provision of such facilities alone can be taken as indicating urbanization of a settlement.

There is no doubt that taking the three criteria based on population size, density and occupation together, a fairly good approximation of the extent of urbanization of a settlement is possible. Compared to tiny, sparsely populated, agricultural settlements in rural areas, one would expect urban settlements to be large, densely packed and humming with non-agricultural activities. As in any kind of statistical exercise based on broad groupings, 'cut-off points', no matter how fixed, are bound to be somewhat arbitrary, and there would always be room for disputing one figure or another. What is important is to avoid arbitrary decisions or decisions under pressure from various lobbies. In fact, some decisions of the Census authorities indeed appear to be arbitrary, for example the bypassing of Dabgram in Jalpaiguri, which is almost an extension of Siliguri, in the 1971 Census, though it had a population of 38859 and the vast majority of the workers were engaged in non-agricultural activities.² Its sudden emergence in 1981 as a Class II town with a population of 76210 took everyone by surprise.

Several other definitional problems are worth noting at this stage. First, settlements which are neither rural nor urban, form a special category, e.g. the coal mine areas of Burdwan or the tea plantations of Darjeeling and Jalpaiguri. In many cases, these areas are served neither by the rural panchayets, nor by the municipalities nor by any other kind of authority, excepting whatever liability or obligation is assumed by the company engaged in coal mining or tea plantation.

Second, semi-urban settlements, which are identified by the people themselves as a distinct category and are often described as 'ganja' or 'bandar' in local dialects. These are primarily market places with shops, godowns, hotels and brick-built houses, and with a number of government offices designated as block head quarters. Many of these are accessible by roads and railway stations, which also explains their high growth. Passing through these crowded areas along the highways one gets the impression of being in a town. These often contain more than 5000 people, and possibly also satisfy the density criterion; and are indeed in the process of becoming towns as the proportion of non-agriculturists passes the 75%

threshold. These entities play a major role in the life of the surrounding villages as centres of sports, education, cultural and governmental activities. Though not urban areas yet, these do display many of the urban characteristics.

The third type of confusion arises with regard to the territorial limits of the towns, which are arbitrarily set and are subject to periodic revisions. Such revisions become necessary as the periphery attracts population from other areas and strengthens its claim to become a part of the town itself. However, apart from the fact that extensions of town territories are often done without regard to scientific norms, these play havoc with urban statistics and make comparison over time a tricky exercise. In this situation it is possible for the population of a city to grow along with its territory, while the density and the proportion of non-agriculturists decline as the low-density erstwhile rural areas are included; thereby giving the paradoxical result of urban growth being associated with the dilution of some of the major 'urban characteristics'.

The fourth type of confusion is related to the 'urban agglomerations', that is Census artefacts which are a collection of towns and cities close to one another, in most cases centering round a major urban area. The arbitrariness in their formation and territorial demarcation—putting together an assortment of towns of varying size and character, some closer to our image of big cities and some very rural—makes any scientific analysis of their growth a hazardous exercise. In addition, these pose serious difficulties in calculating shifts in urbanization, since the population in very small urban settlements are also aggregated in Class I urban agglomerations, thereby magnifying the degree of concentration of urban population. What is lacking is a set of guidelines regulating such administrative decisions, so that these do not reflect the whims, caprices or fascinations of the decision-makers.

Further complication is added when an urban entity like the Calcutta Metropolitan Development Authority (CMDA) is created with a defined jurisdiction by the state government, which, in addition to 3 corporations and 32 municipalities, also includes a vast rural area which constitutes about half the territory and accounts for around five per cent of the population. The anomaly introduced by a large rural unit as a part of a metropolis cannot be easily overlooked. At the same time, the fact remains that the very decision to incorporate those areas within a metropolis hastens their

transformation into urban areas, and adds to the concentration of population in the metropolis.³

Lastly, frequent changes in the occupational definitions used by the Census authorities also compound the statistical problems in measuring urban growth and some of the other key urban variables. Changes in the pattern of urbanization revealed by statistics may not be easily interpreted without knowing for sure how far those changes are no more than definitional, and do not reflect real changes on the ground. To give an example, while the data for 1961 and 1971 Censuses indicated a shift in favour of primary occupations in most towns of West Bengal, a comparison of figures for 1971 and 1981 would indicate that such tendency towards occupational shift has been reversed. One can only speculate how far this is actually the case, given the important definitional changes of occupation variables introduced in 1981.

These definitional queries are being raised in order to qualify the conclusions derived here on the basis of Census data. It should be added that in the discussion, by 'Calcutta' we mean the core city, while the 'Calcutta Urban Agglomeration', is regarded as the larger entity.

III Evolution of towns

In our paper on 'Pre-British Mode of Production in Bengal', we have presented an account of the level and pattern of urbanization in this area during the pre-colonial days. In those days, towns were largely trading centres, army camps, or places of pilgrimage or where the royal court was located. Some of the largest urban centres, such as Tamralipta, Saptagram, Chattagram and Dhaka were port towns. The growth of the textile trade with the patronage of the foreign interests led to the growth of urban centres like Murshidabad (which was also the capital), Dhaka (old capital), Malda (near another old capital), Hooghly (the port which replaced Saptagram as the major port) and Cossimbazar (which was close to Murshidabad and Malda) among others. Through these towns an extensive trade was conducted along the river Ganga or along the sea coast up to as far as Surat, in addition to what the foreign ships carried for Europe. While textile production was largely concentrated in the villages, some of the major towns, such as Dhaka and Murshidabad contained factories (called karkhanas in Bengali) which produced luxury pieces for the nobles and the foreign market. The level of urbanization was high by the standards of the time, and some of the

largest urban centres, such as Dhaka or Murshidabad, compared favourably with cities like London and Paris in population size.⁴

One of the immediate consequences of the British takeover of Bengal was rapid de-urbanization and de-industrialization of the territory. The traditional textile industry was delivered a severe blow from which it never recovered, while the other rural-based industries too suffered from the competition of factory-made cheaper supplies. With the collapse of the economic base, the population of the large urban centres such as Dhaka and Murshidabad registered massive drops. The village-ward migration intensified the pressure on land, which created further problems for the rural economy. The erstwhile artisans part-timing as agriculturalists now devoted themselves exclusively to farming as primary occupation, and some were even pushed to become agricultural labourers. The further decline of the rural economy due to the imposition of the heavy land revenue demands, leading to the disastrous famine of 1770, further constrained the scope for urban economic activities, a large part of which was centered round the food trade.⁵

The pattern of urbanization, which eventually evolved, was largely the creation of the British. Beginning in the mid 1830s, the jute factories on both sides of the river Ganga in the neighbourhood of Calcutta, the railway towns after 1851, and the coal and tea plantation towns in the second half of the nineteenth century formed the basis of the new urbanization pattern based on industries. Earlier, in fact in the latter part of the eighteenth century and in the early part of the nineteenth century, the activities around commercial crops such as indigo, opium and mulberry, had led to the settling up of many 'kuthis' or 'factories' in the rural areas, which also grew into towns in due course. In all these cases the rationale for production was export, and was not linked up with the consumption needs of the local population, at least to begin with. In almost all these cases, the labourers employed for various activities—from manual workers to clerks and supervisors—had to be brought from outside, since the local workers were either unwilling (e.g. in cases of jute or coal) or inadequate or both (e.g. in the case of the tea industry). In many instances even the food for the workers had to be brought from outside (e.g. in the cases of the coal and tea industries). In other words, these new towns had few linkages with the local market, in terms of labour supply, market demand or even

meeting the consumption needs of their population. These were in the main 'enclaves', transplanted from outside, and sustained by external links.⁶

In the cases of two other sets of towns—administrative and trading towns—whose growth was also encouraged by the British policies, the links with the rural hinterland were stronger. In many cases the British made old and established towns the administrative headquarters or trading outposts and, hence, could build on their existing rural linkages. But the importance of these towns was not comparable to those of the industrial towns, which had their origin in the British colonial economic policies.

Overshadowing everything else was the growth of Calcutta city itself, from a motley collection of three fishermen's villages on a marshy land to one of the largest metropolis of the world. Like other port-based colonial cities in the third world, the main basis of Calcutta's economy was export trade, and, to serve this role, it was elaborately linked by way of roads and railways with the hinterland, which covered, in addition to Bengal, the larger part of northern and eastern India. In particular, it was closely linked to the jute, coal, tea and indigo centres. The construction of railways facilitated large scale migration of population over long distance, which too helped to increase the concentration of population in and around Calcutta city, for work in jute and other factories. Calcutta also served as the main recruitment centre for the labourers needed in Assam tea gardens and in east Africa and West Indies. Thus, traffic in both merchandise for export and labour power for work in various industries pivoted around this port city which was also the capital of British India until 1911. Periodic famines, from the great famine of 1770 to the last great famine of 1943, brought the destitutes from rural areas to Calcutta in search of food; because it was more easily accessible than some of the nearer urban centres and held a better promise of relief. All these led to the growth in the city's population. Another important aspect in its growth was the concentration of absentee zamindars, who brought with them an enormous concentration of purchasing power and became instruments through which the rural surplus was transferred to this primate city. This colossal concentration of purchasing power brought in its wake goods, services and people to serve the elite in various capacities who, in their turn, made further demands for goods, services and people. Through a process of cumulative

causation growth led to further growth and still further growth. Calcutta grew from a city of 428000 in 1872 and 933754 in 1901 to 2167485 in 1941, 2698494 in 1951, 2927289 in 1961 and 3291665 in 1981. The population of the Calcutta Urban Agglomeration grew from 1.49 million in 1901 to 3.58 million in 1941, 4.59 million in 1951, 5.74 million in 1961 and 9.17 million in 1981.

Our account, so far of the evolution of the existing pattern of urbanization in West Bengal, clearly points to its two important features—it was externally imposed in order to meet the needs of the colonial economy and was therefore mainly based on the export trade, and it was delinked from the developments in the rural areas. Statistics show, that agricultural production remained virtually stagnant during the British period⁷ and could not therefore play any role in urban growth, except in a negative way, by pushing out the rural destitutes. Towns were, in the main, entities ruled by the immigrants who came, in many cases, from distant areas and produced or mobilized goods for the external market. Urban development was far from spontaneous or based on indigenous factors, as would have been the case had there been no colonial rule, and as was indeed the case before the British take-over. Unlike the urbanization experience of the developed countries of today, where it was based on agricultural development on the one hand and industrial progress on the other, the colonially-induced urbanization in West Bengal was without roots.

It is true that up to a point urban growth was synchronized with increasing job opportunities. Those who came to Calcutta city or other urban centres seldom returned empty handed; there was some job or other for every one irrespective of his social class. For the élite there were prestigious professions as doctors, lawyers, senior civil servants and judges. For the middle class clerical, teaching and supervisory jobs requiring some education were plentiful. For the poor, a variety of jobs was offered, from domestic service to factory employment. In fact, until the first world war, the job market in and around Calcutta and in the plantations and mining towns, was characterized by a serious shortage of manpower. Construction of roads and railways, setting up of new industries, expansion of the bureaucracy and judicial services as also of schools and medical institutions, and the demand for labour from other parts of the British empire—all these maintained a high level of demand for workers until that period.⁸

After the end of the first world war, this rapport between urbanization and industrial expansion ceased to exist. The economic boom of the nineteenth century, associated with coal, tea, jute and construction activities gave way to falling demand for labour power as these activities approached saturation points. The economic depression of the early thirties, coinciding with rapid demographic growth following the success of preventive measures against epidemics now turned the demand-supply relationship against the labouring population. Further, the industrial activities initiated by the colonial regime had limited objectives; these could not be carried beyond the point where these came in conflict with their colonial economic interests. They saw India as a vast reservoir of raw materials and manpower, and sought to maintain it that way. As for the Indian industrialists, although some beginning was made in the latter half of the nineteenth century, when they took some interest in coal, tea and banking and sponsored some industrial activities, by the early part of the twentieth century such activities had come to a halt; as many of them found rentier income from land more attractive and less risky than investment in industries under various restrictions imposed by the colonial regime.⁹

Though industrial progress was halted, the urbanization process continued. Lack of jobs in the formal sector now led to the growth of the informal sector of coolies, pavement traders etc. This phenomenon, of continued urbanization unconnected with expansion of job opportunities, is important for understanding the present pattern of urbanization in the state. It also brings out another contrasting feature of the process of urbanization in the third world countries like India, compared to the experiences with urbanization in the developed countries of today, where the latter maintained a close relationship with industrial progress.

The decade of the forties was characterized by four major types of population movements, each of which left its mark on the urbanization pattern in the city. First, the fear of Japanese bomb attack which induced many city dwellers to send their families to native villages, while the war brought the army camps and their hangers-on to the urban areas. Second, the great famine of 1943, which took a toll of six million lives, and pushed a large number of people to Calcutta and other major cities for relief. Third, the great riot of 1946-47, which led to redistribution of population in various areas along communal lines. Fourth, the refugee movement from

the other side of the border after the partition of the country in 1947. Here again, the point to make is that these town-ward movements were not linked to expansion of economic opportunities, and therefore accentuated pressure on both the urban labour market and the civic amenities. The famine-stricken destitutes made the pavements of Calcutta their homes, while the refugees spread to practically all the urban areas, and in many cases, by their sheer numerical weight, transformed many of erstwhile villages and semi-urban areas into towns. The refugees constitute about a quarter of the population of Calcutta metropolis today, but even in other areas, e.g., in Siliguri and other towns in North Bengal, they played a major role in speeding up urban growth.

The above account shows how the present pattern of lopsided urbanization evolved over two hundred years, as a consequence of colonial economic and administrative policies. While Calcutta, the port city and administrative centre, grew, as also certain other towns which had their origin in colonial industrial activities, the rest of the state remained backward, agriculturally-based and neglected. The level of urbanization was not high, given the low level of industrial development, whilst the relatively small urban population remained highly concentrated in Calcutta city and its periphery. There was no harmonious hierarchical distribution of towns by size categories—from very large to very small, each playing its part in the system of distribution of goods and services and having an areal jurisdiction of its own as could have emerged had the urban development been autonomous and closely linked with the local economy.

IV Urbanization patterns and trends

The two prominent features of urbanization pattern in West Bengal are the low level of urbanization, and an excessive concentration of the urban population in Calcutta metropolis and Burdwan district. The level of urbanization, at 26.49% in 1981, is higher than the national average of 23.73%, but lower than those for the advanced states such as Maharashtra (35.03%), Tamilnadu (32.98%), Gujarat (31.08%), Karnataka (28.91%), and Punjab (27.72%). The rate of growth of urban population, at 31.61% during 1971-81, is among the lowest in the country, the national average being 46.02%; and the same was the case during 1951-61 and 1961-71. Considering the size of Calcutta metropolis, or the rich mineral base of its hinterland, both the level and the rate of growth of urbanization in West Bengal would appear to be exceedingly low.

More striking is the dominance of the urban scene by the Calcutta metropolis. In 1981 the total urban population in the state was 14433486, of whom 9165650 lived in Calcutta Urban agglomeration, that is about 63.5%. If the urban population of Burdwan, of 1425659, is added to this, they together would account for 73.4% of the state's urban population.

In contrast, urban population in the rest of the state is small and is thinly spread over a large area. Once the districts partly/fully covered by the Calcutta metropolis (Calcutta, Howrah, Hooghly, Nadia and 24-Parganas) and Burdwan are excluded, the proportion of urban population in the rest of the state becomes a meagre 12.4%. Of the ten districts in that area in case of seven the proportion of urban population is below 10%; Malda with a 4.78% urban population occupies the bottom position. This shows that, leaving aside Calcutta metropolis and the district of Burdwan, the rest of the state is very rural indeed.

A comparison with the population statistics of other states would reveal that the urban population in West Bengal is more unequally distributed than in any other state of India. Whereas in Maharashtra Bombay has Pune and Nagpur as major alternative urban centres and in Ahmedabad in neighbouring Gujarat a fast growing metropolis, and while Coimbatore and Madurai compete with Madras city as alternative urban centres, in case of Calcutta U.A. with 9.17 million people, the city next in size is Asansol with an incomparable smaller population of 365371 in 1981. Even when Bihar, Orissa, Assam and various states of eastern and northern India are taken into account as Calcutta's hinterland with a population of around 190 million, the city next in importance to Calcutta is Patna, the capital of Bihar which showed a population of 916102 in 1981. If one adds to the population of Patna, those of Asansol and Durgapore, the three together would account for less than one-sixth of the population of Calcutta metropolis, a very high ratio for any 'primate city' in the world. As Table 7 shows, the urban population per town/city in West Bengal is higher than that for other states except Maharashtra which further confirms the inequality in the distribution of urban population in the state.

Worse still, the demographic domination of Calcutta is showing no sign of waning over time. Table 5 shows, by analysing the Census data for 1971 and 1981, that of the 78 towns newly classified in 1981, 35 were located in districts covered by Calcutta U.A., while

another 27 were located in Burdwan district. Similarly, out of 72 high-growth towns with a growth rate exceeding 40%, 38 were located in Calcutta metropolis and another 8 in Burdwan.¹⁰

Thus, these two major urban complexes continued to account for the lion's share of new and high-growth towns. Furthermore, the population in 100000 strong Class I cities increased its share of the total urban population from 70.98% in 1971 to 76.84% in 1981. Even when agglomerations were broken up into constituent urban units, the proportion registered an increase from 51% in 1971 to 55.49% in 1981. It should be added that this increase in the share of the Class I cities in the aggregate urban population is more due to the increase in the number of urban areas belonging to that class than to the increase in the population of those cities which were in the Class I category in 1971; the number of Class I towns having increased from 15 to 24 over this period; yet the fact remains that such a vast proportion of the urban population live in 100000 plus urban settlements.¹¹

The dominance of Calcutta is not confined to the demographic sphere alone. The districts of Calcutta metropolis account for more than four-fifths of industrial output and factory employment in the state, and similar high figures are also revealed in terms of other economic indicators. Calcutta equally dominates the social and cultural life in the state, as it operates as a powerful magnet attracting the poets, scholars, artists, sportsmen and others towards it. Such movement towards Calcutta and Burdwan affects less developed areas, which are deprived of skilled manpower and local talent and even of financial resources which are transferred along with people. This 'brain drain' and 'resource drain' is taking its toll, as it will appear from an examination of the data relating to the western and northern districts of the state.

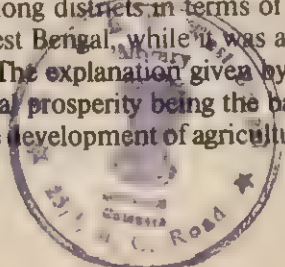
Taking the western districts of West Bengal into account, that is Midnapore, Birbhum, Bankura, Murshidabad and Purulia, while they account for 41.34% of West Bengal, they had a share of 15% of high-growth towns, and of only six out of 78 new towns. In none of these districts the level of urbanization exceeds 10%. In terms of progress with urbanization also, during 1971-81 these districts occupied five of the last seven positions in West Bengal. On the other hand, defining 'low-growth towns' as having less than 15% decadal growth rate, a high proportion of these belonged to this area in 1981,

where agriculture is backward. It should be added that 7 of the 22 low-growth towns are public sector settlements, e.g., railway town, airport, defence estate etc., and one is Burnpore Steel. In these districts, not only that the level of urbanization is low, the rate of growth of urban population is among the lowest in the state; in other words, these are further sliding down the urban scale.

A similar picture emerges when one considers the north Bengal districts, among whom only Darjeeling, with 27.86% of urban population has a figure exceeding the state average. This area too accounted for only 10 new towns and 7 high-growth towns, and contained two districts with the lowest levels of urbanization and rate of growth during 1971-81 in the state—Malda (4.78%) and Cooch Behar (6.91%). However, both Darjeeling and Jalpaiguri districts registered high urban growth during 1971-81, while West Dinajpore alone accounted for 4 high-growth towns.¹²

In her paper, Nipa Ghosh makes a useful comparison between Punjab and West Bengal, as depicting two contrasting patterns of urban growth.¹³ While Punjab was for a long time behind West Bengal in terms of level of urbanization, in recent years it has just overtaken the former. What is striking is that, having more or less the same level of urbanization, Punjab's urban population is more evenly spread over the state than is the case with West Bengal. In case of the latter, Calcutta with a population of 9.17 million was way ahead of Asansol (365000), Durgapore (306000) and Kharagpore (234000), the three other cities in order of numerical importance, while the biggest city of Punjab, Ludhiana, had a population of no more than 606000 in 1981, followed by Amritsar (589000), Jalandhar (405000) and Patiala (205000) close behind. Taking the ratio of the population in primate city with the aggregate population in the next three cities as a measure of primacy, in Calcutta's case it was a very high 10.11, while it was a very small 0.50 in the case of Ludhiana. The primacy ratios for Bombay and Madras cities were 2.26 and 1.76, respectively, in 1981, much lower than the figure for Calcutta. Furthermore, the coefficient of variation among districts in terms of urban proportions was 0.69 in case of West Bengal, while it was a small 0.27 in the case of Punjab.

The explanation given by Nipa Ghosh is in terms of (a) agricultural prosperity being the basis of urbanization in Punjab, and (b) the development of agriculture being more uniformly spread in that



state. Whereas the rate of growth of agricultural output was almost uniformly around 7% in case of the districts of Punjab, these varied widely from around 4.5% to a negative growth rate of less than 1% in case of the West Bengal districts.

Another major explanation could be the differences in the pre-independence land tenure systems—Punjab being governed by ryotwari system of settlement with individual peasants (mostly the rich ones), while West Bengal being under the zamindari system consolidated by the Permanent Settlement of 1793 with the zamindars. In the latter case, the concentration of rural economic power in the hands of the zamindars, who were usually absentees and resided in or around Calcutta, facilitated the transfer of rural surplus to the metropolis, which in turn led to high and growing demand for labour power, goods and various services. In contrast, in Punjab, agricultural power being diffused, under the ryotwari system, the surplus was directed towards smaller towns where the richer peasants moved after accumulating some wealth; and even after setting up an establishment in the towns they continued to retain active interest in agriculture unlike the zamindars of Bengal. Thus, in the case of Punjab, the small and medium towns, linked closely with the agricultural production, and widely dispersed over the territory, became the major feature of urbanization. In fact, until two decades ago, all the three leading towns of Punjab were quite small, with around 200000 people, and had the appearance of overgrown villages in many respects.

The paper by Sudeshna Ghosh Roy also confirms the point, that in case of West Bengal, the main inspiration for urban growth came from the industrial and manufacturing activities.¹⁴ She compared two areas at different levels of urbanization, 24-Parganas, Hooghly and Howrah districts with urbanization levels of 38.90%, 29.54% and 45.22% and Bankura, Midnapore, Purulia and Birbhum with urbanization levels of 7.63%, 8.54%, 9.00% and 8.33%, respectively, by regressing the urbanization level on a set of occupational variables.

In case of 24-Parganas, Hooghly and Howrah, manufacturing yielded the most significant variable, and the overall explanatory power of the regression equation, as given by the value of R^2 , was quite high; but in the case of the western districts the explanatory power of the equation was low and services and trading appeared to be the more significant variables explaining urbanization. She also

carried out a chou-test to show that the pattern of urbanization in these two areas was indeed different.

Pabitra Giri's article on urbanization pattern makes the important distinction between size-class and areal distributions of urban population, while noting that in many cases these two might be closely correlated.¹⁵ It shows that, if the six size-classes are categorized into three broader classes—cities with more than 100000 people, medium towns with populations between 20000 and 100000 and the small towns with lower than 200000 population—the middle towns exhibit the highest rate of growth while the share of cities has declined from 59% in 1951 to 55% in 1981. But this decline in the share of the cities is largely because of the stagnation of the largest of all, Calcutta; once Calcutta city is excluded, the rate of growth of the cities compares favourably with that for the medium-sized towns. He also notes a decline in the proportion of urban population in Calcutta Urban Agglomeration from 75% in 1951 to 63% in 1981. Similarly, calculating gini-coefficient based on cumulative distribution of urban population by size-classes defined by deciles one finds that it drops from 0.79 in 1971 to 0.65 in 1981; which again is largely because of the stagnation in Calcutta city. However, despite this greater equality in terms of size-class distribution of urban population in recent years, the areal distribution continues to be highly skewed because most of the new towns and high-growth towns are located in the districts with higher levels of urbanization.⁸

Tables 1 and 7 provide detailed comparison of West Bengal with other states of India, based on urban data from 1971 and 1981 Census. It shows that in terms of urbanization level its position is sixth among twenty states, after Maharashtra, Tamilnadu, Gujarat, Karnataka and Punjab. In terms of decadal growth of urban population during 1971-81, its position was 19th out of 20 states. These confirm West Bengal's low level of urbanization and still lower rate of urban growth among the Indian states. Otherwise, in terms of concentration of urban population in Class I towns with more than 100000 people, it ranks at the top among the Indian states.

In terms of gender-ratio in urban areas it is seen that Calcutta ranks 17th among twenty states—only three tiny states in mountain areas, Himachal Pradesh, Sikkim and Nagaland holding lower positions. In case of the gender-ratio in the cities, West Bengal holds the bottom position, since the three states in mountain areas do not

contain any Class I town. This reflects the heavy concentration of migrants in the urban population and the industrial basis of urbanization in West Bengal, particularly in the case of the cities.

As for the population served by an average urban unit, West Bengal's rank is 14th among 20 states; and when only the urban population is considered the rank becomes 19th. On an average an urban unit serves 187236 people and 49600 urban people—which are very high figures indeed, and reflect on both the limited spread of urbanization and the high concentration of urban population.

Tables 2-6 represent various aspects of urbanization for different districts of West Bengal. Table 2 shows that five western districts (Murshidabad, Purulia, Midnapore, Birbhum and Bankura) and two northern districts (Cooch Behar and Malda) hold the bottom seven positions, with less than 10% of urbanized population. At the other end, Howrah, 24-Parganas and Hooghly around Calcutta and Burdwan and Darjeeling hold the top five positions, with levels of urbanization exceeding the state average. Nadia near Calcutta shows a remarkably low level of urbanization, while in cases of Jalpaiguri and West Dinajpore high urban growth during 1971-81 has helped to raise the level of urbanization above 10%.

Table 3 shows that highly urbanized districts are usually also the ones with higher levels of agricultural progress—as revealed by the yield per unit of land in the case of rice. The four districts around Calcutta and Burdwan occupy five of the top six positions in terms of yield. These also occupy five of the top seven positions in terms of growth rate in agricultural production. At the other end, four out of bottom seven districts in terms of urbanization level also occupy position among the bottom five in terms of growth in agricultural production. However, Malda, Murshidabad and Midnapore hold good positions in terms of agricultural growth. In terms of yield, Cooch Behar, Purulia and Malda hold three of the bottom six positions, while Birbhum, Bankura, Murshidabad and Midnapore among backward districts reveal good yield figures. The north Bengal districts—Cooch Behar, Jalpaiguri, Darjeeling, West Dinajpore and Malda—perform badly in terms of yield, and excepting Darjeeling and Malda, also in terms of rate of growth of agricultural production. Broadly, while most urbanized districts are also most agriculturally developed, the results lack consistency at the lower end.

Coming to the growth of urban population, there seems to be a

close correlation between this and the growth in rural population—the major exceptions being Burdwan with a lower than average overall growth having the second highest rate of urban growth, Birbhum with a very low overall growth having a high urban growth, Jalpaiguri showing the highest urban growth figure, and Cooch Behar with a good overall growth rate showing a low urban growth. For others, the rankings in terms of total and urban growth were very close.

For the five western districts the percentage barely increased from 9.84 to 10.00 during this period. On the whole, the relative significance of the various regions in the urban population remained the same. Leaving aside Calcutta, the other three districts suffering relatively over the period are among the most backward ones—Cooch Behar, Purulia and Bankura. In contrast, the north Bengal districts (excepting Cooch Behar) show very high rate of urbanization.

In Table 6, it is seen that Classes I and II together account for about 60% of the urban population in the following districts : Hooghly (82.51%), Malda (81.29%), 24 Parganas (77.54%), Darjeeling (75.14%), Howrah 69.92%), Nadia (66.82%), West Dinajpore (64.53%), Burdwan (59.79%). In the case of Murshidabad (70.23%), Birbhum (99.91%), Jalpaiguri (48.75%), Bankura (43.18%) and Purulia (48.65%), towns with population between 10000 and 50000 play a major role. In Malda (18.71) and Cooch Behar (13.57%) towns with less than 10000 people have a relatively higher predominance. Midnapore Murshidabad, Burdwan and Purulia generally show a fairer distribution of urban population between various categories. Generally speaking, more urbanized districts show a greater concentration of urban population in larger towns.

We find in Table 5, that urban population per urban unit is the highest in the most urbanized districts (excepting Burdwan)—that is four districts around Calcutta and Darjeeling. At the other end—Cooch Behar, Purulia, Malda, and Birbhum occupy the bottom four positions. In cases of the other three backward districts, Bankura, Murshidabad and Midnapore, the ranking is somewhat different. However, in terms of coverage of total population, the urbanized districts (Howrah, Hooghly, 24-Parganas and Burdwan) perform better, while the backward districts show a very low coverage of total population by urban units (Malda, Bankura, Midnapore, West Dinajpore, Birbhum, Murshidabad, Cooch Behar and Purulia).

Regarding municipalization (Table 6), there does not appear to be a clear pattern in terms of level of urbanization. This is largely because, in the pre-independence period almost all the urban units were municipalized irrespective of their size, while the criteria for municipalization have been more restrictive in the post-independence period. This explains the paradox of 60% municipalization in Bankura, where three of the five towns are old municipalities, and only 5.71% in Howrah, where most urban centres are of recent origin.

Table 8 gives size-class distribution of urban units. It shows that when the new towns are excluded, and the promotions, demotions, declassifications and mergers between 1971 and 1981 are ignored, the proportion of urban population in Class I cities of 1971 (with outgrowths) actually declines from 55.70% to 53.10% in 1981. This confirms that the increase in the proportion of population of Class I cities is largely due to the promotion of towns to that Class.

Figures on promoted, demoted, declassified and merged towns in 1981 shows that, unlike the situation in several other states, urban growth in West Bengal is exceptionally stable. Less than 1% of towns (only 2) have been demoted, and, similarly, less than 1% of towns (only 2), have been declassified. Only 8 out of 291 urban units show negative growth and, as already noted, only 22 towns show a growth rate below 25%. In other words, a town normally holds its position or improves it between two censuses. Table 5 shows that the vast majority of promoted towns—like new towns and high growth towns—belong to the already urbanized districts.

Thus a close look at the Census data over the past four decades points to the following trends in terms of urbanization :

(i) The city of Calcutta has virtually stopped growing; its decadal growth rates being 8.50% during 1951-61, 7.96% during 1961-71, and 4.96% during 1971-81. Considering that the average rate of population growth in the state, taking both urban and rural areas into account, is around 23%, which can be taken as approximating natural rate of growth, it can be concluded that Calcutta city is a 'net-outmigrating urban area'; more people leave the city than those coming in. There may be several explanations for these, e.g., congestion, high land price and rent, declining civic facilities, declining job opportunities etc.

(ii) While the city itself is not growing, its periphery, the Calcutta Urban Agglomeration (CUA), which covers a large area consisting of 107 towns and cities, and is spread over five districts—Calcutta,

Howrah, Hooghly, 24-Parganas and Nadia—is continuing to grow; its decadal growth rate being 30.35%. This is not a feature which is unique to Calcutta; for example, in the case of Madras city too, the periphery is expanding while the growth in the core city has been stunted. In other words, the capacity for growth of the Calcutta Urban Agglomeration is far from exhausted. The rural areas around the agglomeration show an even higher rate of growth, and are fast developing into urban areas.

Many of these small towns and surrounding villages perform the function of 'commuter settlements' a large proportion of whose population work in the city of Calcutta. While no reliable estimate of the commuters is available, most observers would put the figure between 1.0 and 1.5 millions a day. This has to be taken into account when devising a strategy for urbanization, since the commuters also make demand on the civic facilities of the city, though not living there at night.

(iii) The dominance of the Calcutta Urban Agglomeration on the economic, demographic and social life of the state continues; given its two-thirds share of urban population and four-fifths share of industrial output and employment. However, the Asansol-Durgapore subdivision of Burdwan district is rapidly emerging as a major alternative urban centre, with a relatively faster rate of growth and with a higher proportion of new and high-growth towns. The basis of such growth is mining activity and industrial expansion. Durgapore, a steel town, has passed the 300000 mark within thirty years of its foundation, while the older Asansol city now ranks second after Calcutta Urban Agglomeration among the cities of the state. This area might witness an even higher rate of growth should the 'freight equalization policy' of the central government be revised, which would enable this area to take full advantage of its proximity to rich coal and other mineral deposits.

(iv) The level of urbanization in the northern districts is still very low (11%) apart from the Darjeeling district, but the growth of Siliguri town in recent years indicates possibilities of an independent urban development in that region, based on its locational advantage.

(v) The lowest position on urbanization scale is occupied by the western districts, particularly Bankura and Purulia, and to some extent also Midnapore and Birbhum. In the case of the first two, which are also traditional 'out migrating areas', the reason lies in not having a prosperous agricultural hinterland, while whatever industries exist are the traditional small scale, household-based ones, which are declining and facing a bleak future.

On the whole, but for a few changes here and there, the pattern of urbanization in West Bengal remains largely similar to that inherited at the time of independence. If Calcutta city is not growing, Calcutta Urban Agglomeration is; if the city of Burdwan has not shown much capacity to grow this has been more than compensated by the growth in the Asansol-Durgapore subdivision of that district; and but for a Siliguri here and a Haldia there, the situation in western and northern areas of the state has not changed much. It might be asked, why?

Perhaps the simplest answer is that; because nobody bothered. Neither at the central nor at the state level was there any conscious thinking regarding the need to change this pattern of urbanization through planning decisions and concrete programmes. The preoccupation, as during the colonial days, was with Calcutta, though that failed to bring about any significant change in the conditions of life in that metropolis too. The first major effort in urban planning was made in 1960, when the Calcutta Metropolitan Planning Organization was set up; and though its Basic Development Plan took into account the 'regional context' covering four states forming the hinterland of Calcutta, in the actual programmes recommended and later implemented, the smaller urban centres were largely bypassed.¹⁶

In the absence of any organized governmental effort, a change in the urbanization pattern could have been brought about through a radical improvement in the agriculture of the state. But not only such agricultural transformation failed to occur, whatever limited agricultural success was achieved was concentrated in the industrial districts around Calcutta, while districts more dependent on agriculture for livelihood generally displayed the lowest levels of agricultural development (Table 3). This high correlation of industrial and agricultural development in the districts around Calcutta city and in Burdwan naturally helped to strengthen the tendency towards urban concentration. The development of agriculture in Hooghly and Burdwan, particularly in potato producing areas centering round cold storages, led to the emergence of agricultural towns and hastened their growth, but such development did not occur in the other areas. Thus whereas is the case of Punjab and Harayana agricultural development was widely diffused over the state, and spurred urban development based on the spillover of rural prosperity, that was not to be the case in West Bengal.

V Case Studies

Several recent case studies, conducted on different regions and towns of the state, confirm the above observations.

Ghatal: A subdivisional town of Midnapore in the western part of the state, with a population of 35433 in 1981, it was once an important urban centre and is one of the oldest municipalities of the state dating from 1869. A tiny feudal settlement, its early prosperity was based on a sericulture processing factory (*resham-kuthi*) set up by the East India Company on the bank of river Silabati. Silk and brass metal products from this town were supplied to the markets of Calcutta. Basing on these products, this town, along with four other urban centres in the subdivision—Kharer, Khirpai, Chandrakona and Ramjibanpore—developed as a major marketing area on this part of the state. River was the main mode of transport; but this eventually became a serious handicap when road and rail connections developed elsewhere and the area came to be considered as remote and inaccessible. As a consequence, the town stagnated, and its traditional household industries registered a steep decline between 1901 and 1951.

From 1951 this town is again showing signs of growth—the population jumped from 16125 in 1951 to 21062 in 1961, 27570 in 1971 and 35433 in 1981, mainly for two reasons. First, the migration of refugees after 1951, and then the development of road transport and a bridge across river Rupnarayana which has facilitated access to Calcutta, which is 65 miles away. The main economic activity of the town is trading, but the fragile nature of its economic base is revealed by the dependence of a very large proportion of workers on agriculture. Between 1961 and 1971, the proportion of cultivators and agricultural labourers among the workers increased from 38.3% to 48.1%, though it declined somewhat to 41.8% in 1981. Such a high proportion of agriculturists in the working population would have normally disqualified a settlement from being classified as a town; the fact that it is still called a 'town' is largely because of its population size and a long municipal tradition. Here demographic growth gives an illusory picture of urban growth, but in terms of civic amenities too this is no more than an overgrown village, which is amply demonstrated by the article of Sachinandan Sau.¹⁷

Sonamukhi: A town in backward, semi-arid Bankura district, also dates back from the early days of the British Raj when a kuthi

was set up by the East India Company for sericulture-processing, and, like Ghatal, came to develop some traditional household industries such as those involving brass metal, and became a major marketing town in the region. For the past few decades it has ceased to grow—the population showing an imperceptible increase from 15027 in 1961 to 19899 in 1981, indicating large 'net-outmigration' from the town. A major explanation for its stagnation is the decay of the traditional industries, while nothing has taken its place in the urban economy. Though, unlike Ghatal, the proportion of agriculturalists among the workers is small, the lack of agricultural development in its hinterland is a major cause of its decline. Outmigrants from its rural hinterland, however, bypass Sonamukhi and move to more prosperous rural and urban areas of neighbouring Burdwan district, in search of job. 'Service' is the most important provider of jobs by default, accounting for about seven-tenths of workers.¹⁸

Bishnupur : A similar picture is presented by another leading town of Bankura, Bishnupur, with a longer ancestry, but beset with similar problems of stagnation following the decay of the traditional industries, and the continued backwardness of agriculture in the hinterland. Here too, more than seven-tenths of occupations are provided by the all embracing 'services', while the traditional industries account for the bulk of the rest, covering a wide range from weaving to bell metal and conch shell production. The study by Datta and Bhattacharya illustrates the prospects and limits to urban development in this region.¹⁹

Malda : Located on the northern side of the river Ganga, this town presents a picture of growth in an essentially backward area, as revealed by Nandita Bhattacharya.²⁰ The district of Malda, with a 4.78% urban population, is one of the least urbanized in the country; Malda (English Bazar) town being virtually the only urban centre of any consequence. Like the other old towns with a sericulture base, here too the traditional industries are in a state of decay, while the other economic base—mango plantations—has not been doing as well as it should. Despite this, the population of the city has grown significantly from a small figure in 1941 and 61713 in 1971 to 79014 in 1981, giving a decadal growth rate of 28.03% during 1971-81. Having no industrial backing, its growth has been mainly due to three factors—natural growth of its population, some spill-over from the adjoining rural areas, this being the major urban centre in the district, the refugee inflow after the partitions of the country in

1947, and its locational advantage lying halfway between Calcutta and Siliguri and often described as 'gateway to North Bengal'. The construction of a national highway and of the Farakka bridge across the river Ganga has considerably enhanced its importance in the trade-transport network, while the construction of a thermal power station at Farakka on the other side of the river has created a new urban axis linking the two. Given its role as a trading-transporting town, hotels, garages etc. mark its landscape. The rural hinterland is fertile, unlike the Bankura towns, and might respond favourably to the opportunities created by the transport facilities, to influence in their turn the course of urban development in the district.

Siliguri : This is the largest and the most important town in North Bengal and is also the one recording the highest rate of growth in recent years. A small village in the 1920s, and having no more than 10487 people in 1941, by 1981 the population reached a figure of 154378. In fact, adding to it Bagdogra, Dabgram and other urban areas in its vicinity, the total population would exceed 435000. Its growth has been due to a combination of factors, as described by Manas Dasgupta in his paper, such as large scale refugee inflow, the enhanced strategic importance of the area following the border war with China in 1962, the proximity to the borders of Nepal, Bangladesh, Bhutan and Sikkim and the access it provides to the north-eastern states of the country, in addition to its traditional symbiotic relationship with the hill economy and its three major economic activities—tea, timber and tourism. Bagdogra air terminal and the New Jalpaiguri railway terminal play important roles in the regional context, thereby adding to the importance of Siliguri as a town. Here too trading and transport are the two major activities, with the tea auction centre carrying a special importance, but the level of industrial and manufacturing activities is very low. Only recently some beginning has been made with the setting up of a chilling plant and a fruit processing unit in Matigara near Siliguri. Like industry, agriculture too is backward and is relatively less attractive compared to earning opportunities in tea gardens, trading and transport activities.²¹

Jalpaiguri : The leading town in North Bengal until the ascent of Siliguri, it presents the picture of a 'plantation enclave', as submitted by Ashim Choudhuri. Built by the British as an army camp and an administrative centre in 1869, after the vast empty land of Dooars was taken over from Bhutan, its main economic base was tea

plantation in the hinterland. The workers for the plantations were brought from the tribal areas of Bihar, while the middle class employees were recruited from the other parts of Bengal. The Rajbansi local population remained largely unaffected by the development of the town and the plantations and continued their agricultural pursuit unconcerned. The town itself had a distinct middle class flavour with lawyers, doctors, clerks, teachers and officials brought from outside, which spurred educational and cultural activities. However, the growth of the tea plantations and the very substantial investment made on these had no impact on agricultural development, nor did these create conditions favourable for industrial and manufacturing activities. The profits made here were syphoned off to Calcutta and Britain, and not reinvested locally, which drastically limited the scope for its growth. The only industrial products of some value, produced in the town were aluminium products, wooden furnitures and biri. Further, unlike Siliguri, access to it was far from easy. While the decadal population growth rate registered a high figure of 48.60% during 1941-51, this was largely due to the movement of refugees, but in the following two decades the percentages dropped to 18.13 and 13.17, respectively, thereby indicating 'net-outmigration' from the town. The development in the other town of the district Alipurduar—more or less follows the same pattern.²²

Durgapore : So far we have been dealing with case studies from the two backward regions of the state—north and west. Turning to Durgapore in Burdwan, an altogether different picture is revealed. A vacant land until the fifties, this area was first exposed to large scale development activities at the time of the construction of the Durgapore barrage of the Damodar Valley Corporation. Beginning with Durgapore Projects Limited, the city now boasts of a steel plant and an impressive array of other industries relating to glass, chemicals, machineries and carbon black. Thanks to this cluster of industries, the area has grown into a large city of three lakhs of people in a matter of three decades. Further, along with the older coal-mining town of Asansol in the neighbourhood, it has prompted the growth of a large number of new industrial and mining towns in the region over the past two decades. Proximity to coal and other minerals on the one hand, and the rich agricultural economy on the other side of the same district have contributed significantly to its growth, and have made it along with Asansol the major counter-

magnet to the Calcutta metropolis in the state, as the account of Nandita Basak shows.²³

Chandannagore : Coming closer to Calcutta, Chandannagore, only 34 kilometres away, inherited a well-developed urban infrastructure from the French in 1951. By no means a town whose life is dominated by industries—with one jute mill, and some furniture and handloom production to its credit—it is classified as an 'industrial town' by the Census authorities because of the occupational composition of its workers, the majority of whom work elsewhere. The secondary activities accounted for 46.78% of the working population in 1971, which reflected the influence of the industrial towns, mostly jute mills, along the river Ganga in the vicinity of Chandannagore. It is basically a commuter town and one with a well-developed tertiary sector, which has greatly benefitted from the agricultural and industrial prosperity of the district. The decadal rate of growth of population during 1971-81, at 34.99%, was somewhat above average but nothing spectacular, its main attraction being the civic amenities the city provides while being so close to Calcutta and other industrial centres, as the report of Bhaskar Bhattacharya shows.²⁴

Nadia District : Lastly, Nadia district, which is partly covered by the Calcutta Urban Agglomeration, Khasnobis and Nath describe its slow urban growth during 1961-71, when the percentage of urban population moved from 18.41 to 18.40, which indicated almost equal rates of growth of urban and rural areas in this border district. Unlike Hooghly, district to which Chandannagore belongs, Nadia is industrially backward. During the British period, it was considered to be a disease-prone district, with little potential for urban growth. However, the decade of 1941-51 registered an exceptionally high 78.96% growth, undoubtedly due to the refugee influx. The rate of growth declined to 51.53% and 32.57% in the following two decades, thereby approximating the average urban growth rate in the state, but what is striking is that the corresponding decadal rates of rural growth were almost as high, at 49.21% and 29.54%, respectively. Thus, the growth of urban areas relative to the growth in the rural areas was low, which led the two authors to conclude that Nadia was a case of urban growth without urbanization, since the proportion of urban population in the district remained virtually stationary during 1951-71. However, a plausible explanation for this phenomenon would have to be found

at the rural end; why the decadal rural growth rate is so extraordinarily high. Answer to this might lie in natural immigration across the international border into the rural areas, since the rural growth rate here during 1961-71 was much higher than the natural growth rate; the rural areas in Nadia being not as advanced as those in Hooghly or Burdwan, it cannot be said that it attracted migrants from other rural areas of the state. In other words, it is less a case of urban stagnation than a case of undue rural growth. It is significant that over this period (1951-71) the proportion of secondary workers in the total urban work force has increased significantly from 17.98% to 29.17%, which is not a sign of decay.²⁵ Furthermore, while the authors have confined their study to the 1961-71 period, more recent data for 1971-81 show a significant increase in the level of urbanization to 21.44% and a correspondingly much higher rate of urban (52.7%) as compared to rural (29.1%) growth during this period.²⁶

These case studies together provide us with a range of variables which in various ways account for the demographic growth or stagnation of various urban centres or regions. Refugee inflow is seen as a major non-economic variable influencing population size in a large number of urban centres though this factor is likely to be of minor significance in the coming years. For a great majority of towns locational factors, including the road-rail linkages, appear to be highly important, as these also influence the volume of trading activities and the marketability of its manufactures. In cases of the districts around Calcutta and Burdwan, both industrial and agricultural activities seem to have been the determining factors in the growth of towns.²⁶ As the case of Jalpaiguri demonstrates, administrative activities permit demographic growth only up to a point, beyond which the prosperity of the hinterland and other factors would count. The stagnation of the towns on the western part follows largely from the decline of its traditional industries and the continued backwardness of its agricultural neighbourhood. Planning for urban development would make no sense unless these factors are taken into account. Transport links should be developed with both the distant larger markets and the immediate hinterland, in order to permit the town to play its trading role. The urban economy should have a symbiotic relationship with the surrounding rural economy, so that the developments in both sectors reinforce each other, through multiple linkages. The town should have an economic base—either an independent industrial

activity (e.g. the steel plant of Durgapore) or activities which promote agricultural and other types of development in the hinterland which in their turn favour urban growth, or a close subservient relationship with a larger urban economy (e.g. as supplier of semi-manufactured products)—without which there are obvious limits to urban growth.

VI Rural Change

Urbanization process anywhere in the world involves consequential profound changes in rural life, some of the key ones being the following :

(i) It involves transfer of population from rural to urban areas, by way of migration. In the case of most urban areas, the initial impulse for growth comes via migratory movement, though in its more mature state natural birth of the local population overtakes net immigration, while the offsprings of the first generations are treated as 'locals. Rural areas act as a kind of reservoir of manpower from which the factories, offices and various services secure their labour supply.

(ii) It involves transfer of food, to be produced by a relatively smaller proportion of agriculturists out of a smaller amount of available land, for a relatively larger proportion of non-agriculturists residing in the towns. This necessitates a better organization of agricultural production to raise productivity per unit of land and per unit of labour, a shift in the cropping pattern and other production activities in line with changed tastes and preferences of the urban consumers, and a system of mobilization and distribution of agricultural surplus to the town population.

(iii) To the extent urbanization is accompanied by the development of town-based large scale industries, the cropping pattern in agriculture would have to be changed in line with their raw material requirements. In other words, more of the agricultural production would have to be shifted towards production of commercial crops, in place of the subsistence crops in vogue.

(iv) Urban-based industrialization would also require the use of the rural sector as a major market for its products, either exclusively, or to supplement export demand and the demand placed by the urban sector itself. This would, in the first instance, take place at the cost of the rural industries, thereby causing displacement of rural artisans, but in the latter stage would crucially depend on the level of living and changes in tastes and preferences in the rural areas. While

in the pre-urban societies rural areas produced both industrial and agricultural products, urbanization would promote a new social division of labour between the two sectors—the rural sector now specializing in agriculture, while the task of industrial production being increasingly shifted to the urban areas.

(v) Urbanization would also necessitate a new rural order, which is responsive to monetization, market demand and technological challenges emanating from the broader economy, compared to isolationist, self-reliant and subsistence production coupled with some petty commodity production for a protected market. This would imply growing disintegration of the feudal production relations, and a freer movement of labour, goods and services with their attendant social and political implications. There cannot be a mature urban society which is based on pre-capitalist forces of production and relations of production.

In the case of West Bengal all these changes are noticed in the course of urbanization over the past two hundred odd years. First, as our surveys on 'Migration and Urbanisation'²⁷ and 'Evolution of Settlements and Urban Classes'²⁸ show, urban growth in this area involved large scale organized migration over long distances—to mines, plantations, jute factories and kuthis for processing indigo, poppy or silk, and road or railway construction sites. In most cases these involved inter-state migratory movements, particularly from the tribal and other backward areas of Bihar, Uttar Pradesh and Orissa (and Nepal in case of Darjeeling tea gardens), organized through the 'sirdar system', the labour contractors who visited the villages and induced people to come. The potential migrants were often offered advances and promises of land and jobs, food and accomodation for the entire family. Such long distance migration became necessary because the local agriculturists were reluctant to participate in those activities by abandoning their traditional occupations—partly because the agricultural production in the state was adequate in the normal years, and partly because they preferred that way of life.²⁹

The earlier waves of migration provided these distant areas with the much-needed contact with the towns and their labour markets; and hence reduced the need for organized migration in the latter phase. The contacts in the town gave information, advanced money, met them at the railway terminal, found jobs and accomodation for them, and provided them with security and support—all of which

encouraged further migration.³⁰ As noted above, such migration continued even after formal job opportunities stopped growing, as they found shelter in the flexible and ever-growing 'informal sector'—as porters in the bazars and railway stations, as rickshaw-pullers, and as travelling salesmen. They performed magic, told fortunes, and sold everything that could possibly be sold from the pavement, worked as domestic servants and carried out other personal services.

Over time, the supply of local labour also increased, with the growing differentiation of the peasantry and the displacement of artisans in the Bengal countryside. Increasing commercialization and monetization of the rural economy brought in its wake high indebtedness, land transfer, eviction of tenants, greater vulnerability to natural calamities, and the resulting land concentration with landlessness as its obverse. As the figures given in "Evolution of Settlements" suggest, rural migrants from Midnapore, Bankura, Birbhum, as also from other backward districts converged on the five more developed districts—Calcutta, Howrah, Hooghly, 24-Parganas and Burdwan—in search of jobs, many of them having been pushed out of the land they possessed and having no other means of livelihood in the rural areas.³¹

However, it was not always the poorest who migrated. Migration took place from all the social classes in the rural areas, with different objectives and for different jobs. In fact, the larger the urban centre the greater was the possibility that the migrant from a Bengal district was a somewhat better-off peasant, while the poorer moved over shorter distances, usually to the smaller urban centres in the vicinity. Those from the wealthy aristocratic rural families, having better access to higher levels of education, plumped for high level professional jobs, while family members of jotedars and other richer sections of the peasantry moved into middle class occupations. Many of these sections retained links with land even after migrating to the towns, and often maintained two establishments—one in the village and the other in town—both under the unified management of the same joint family patriach, who controlled the flow of manpower, finance etc. between the two. As the bureaucracy proliferated, and the activities of the government expanded to diverse fields such as education, health, civic management etc. the demand for skilled manpower grew which prompted further migration from the better off sections of the peasantry.

Another important factor inducing migration was the repeated occurrence of famines during the British period, which forced the

destitutes to move to towns for relief. This again was a reflection of the disintegration of the traditional system of crop-hoarding for disaster years in the rural areas, and the decline in the purchasing power of the people. This, along with 'organized migration' and the vast inflow of refugees after the independence of the country, makes nonsense of purely economic interpretations of migratory movements as voluntary decisions by individuals based on calculations of expected rural-urban income differentials, as depicted in the fashionable Todaro model.³²

Coming to the post-independence period, while migration continues to be an important factor in urban growth (particularly with refugee movement in the earlier years), its relative importance is showing unmistakable signs of declining. Whereas migrants accounted for 54% of the urban population of West Bengal in 1961, by 1971 the proportion declined to 39%. Further, whereas urban migrants accounted for 52% of total migrants in 1961, by 1971 the figure registered a 7% drop to 45%. Rural-rural migration appears to be even more important now—even among the male migrants alone ignoring large female migration associated with marriage—than rural-urban migration. Further, the volume and relative importance of both refugee and inter-state migration have declined, while most of the male migration is now within the state and from one rural area to another. While the decline in the proportion of refugee migrants is understandable, the slowing down of inter-state migration indicates increasing difficulties of finding jobs in urban labour market and the pressure of competition from the local unemployed. This also, in a sense, indicates the limits to urbanization, even after allowing for growth in the informal sector, in absence of dynamic industrial progress.³³

Punyabrata Sarkar attempts in his study to test the validity of the Todaro model in the context of West Bengal, by linking intra-state migration to cities (that is urban settlements with more than 100000 population) with expected rural-urban income differential in the origin. The calculation was made separately on the basis of formal and informal sector earnings, and the probability of finding job was estimated on the basis of the proportion of employed among the work force. He found that the expected-income-differential variable gave a poor and statistically insignificant explanation, while landlessness and land distribution in the origin yielded better, statistically significant results. This further confirms that migration decisions are less a matter of subjective estimation of employment and wage opportunities by concerned individuals than ones which

are influenced by the overall economic and social environment.³⁴

Recent data on migration to Durgapore, the steel town which has registered a very high rate of population growth in three decades, give some highly interesting results. These show that, like industryward migration in the past, most migration was over a long distance — only 12% from within the district and another 23% from the peripheral districts, while 65% came from the other parts of the state and other states. More important, 41% came mostly from the developed districts of Calcutta, Howrah and 24-Parganas. Apart from the fact that inter-state migration is relatively unimportant and is concentrated among the senior and high-skilled personnel, which by itself is a radical departure from the past trend, many of the workers come from middle class background and are first generation working class. This is a new feature, and is likely to become more pronounced if the skill-intensity of the new industries becomes high. Furthermore, a large proportion of them possess land and maintain close links with their origin and see their stay in Durgapore as a temporary one, as Sukumar Sen shows.³⁵

The declining trend of townward migration indicates that, unless the pace of industrialization is stepped up and other attendant economic activities are promoted, the demographic growth in the urban areas would largely become a function of natural increase, and the level of urbanization would remain low.

Second, coming to food production for the non-agriculturists living in the towns, this had also been a priority concern in the British days. In fact one of the causes of famines during the colonial period was the policy of the British government to buy up the rural surplus for the army, civil servants and urban-dwellers and encourage food trade, and to step up such activities in drought years leaving the rural population to fend for themselves. However, while the machinery for mopping up rural surplus was perfected, with the zamindari system as its main prop along with the trading companies, no similar concern was shown for modernizing agriculture or redesigning the production system. The food productivity was low, and the main method of increasing agricultural production was by way of extension of cultivated land by clearing forests and bringing under plough erstwhile 'wasteland' left as common land for grazing. West Bengal remained a food deficit area, whose food production came under severe pressure after the country's independence, when the additional refugee population had to be fed while at the same time diverting a part of the food-producing land in favour of

raw jute production to compensate for the loss of jute-growing areas.

During the thirty years following India's independence, agriculture continued to be ignored, the needs for modernization were overlooked, periodic food crises brought destitutes to Calcutta and other urban areas, while the state remained dependent on the central government for food assistance. Rationing was introduced from time to time, and restrictions were imposed on the supply of food in order to ensure a proper functioning of the system of procurement and distribution of food. The situation has eased with the overall improvement of food production in the country since the late sixties, and some improvement has been registered with productivity, but it is still too low to support large scale urbanization or even rural industrialization beyond a point. The system of food distribution has vastly improved, with a more elaborate network of food shops in the towns and villages, and better functioning of the panchayets as watchdogs and as the main relief agency during natural calamities.³⁶

It is interesting to note how urbanization has affected agricultural production differently in diverse areas. In the case of the enclave economics, such as the tea towns of Jalpaiguri, urbanization has brought about little change in the surrounding areas engaged in subsistence production.³⁷ In the rural areas adjoining Siliguri, the possibilities of earning cash income from casual work in tea gardens or smuggling operations or trading activities have discouraged agricultural activities. In the rural areas in the vicinity of Howrah, the possibilities of work in the engineering industry and allied activities have dissuaded the agriculturist from giving as much effort to agriculture as would have been the case otherwise. In the rural areas near Chittaranjan township, on the border with Bihar, the alternative of a secure, continuous industrial employment with immediate cash income has discouraged participation in agriculture which is seen as risky with variable income and involving a great deal of waiting before income accrues.³⁸ At the same time, it is highly significant that the rural areas in the neighbourhood of the city of Calcutta, and the industrial areas along the banks of the river Ganga, are agriculturally the richest, most productive and technologically most advanced in the state. This explains the paradox of the high level of migration to the rural areas of these industrialized-urbanized districts, from other districts where agriculture is almost the only means of livelihood.

Third, the impact of urbanization and industrialization in terms of the production of raw materials for factories is best seen in the case of raw jute production. In the case of Howrah, the local farmers,

who drew away from factory work because they did not like its environment, took advantage of the jute factories by growing jute for those.³⁹ Even earlier, the processing of silk, poppy and indigo in kuthis made these rural areas develop into towns; and though their products were mostly meant for exports and not for consumption by domestic factories, their cultivation encouraged production for the market and hastened monetization of the economy, since in most cases the traders made cash advances to the farmers. However, commercial crop production is still very low, though recently some progress has been made in increasing acreage under potato and oilseeds, in addition to raw jute. Generally speaking, the developed districts around Calcutta and Burdwan show the best figures in terms of acreage under commercial crops.

As for the role of the towns in inducing changes in production pattern in line with the tastes and preferences of the urban consumers, this is observed in the higher acreage devoted to vegetables. While poultry and dairying are also growing activities, these are still small compared to the scale of demand for those in Calcutta and other urban areas.

As for the growth of rural areas as markets for industrial goods, this again is much in evidence, often at the cost of the rural industries; but the scale of such demand is a function of the purchasing power of the rural masses, which is still low.

Last, as for the changes in the rural order, the colonial rulers, for understandable reasons, were opposed to such change. By carrying out Permanent Settlement in 1793 they actually strengthened the rural vested interests in order to use them as a major prop of their rule. Though some tenancy reforms were carried out in 1859, 1885 and 1928, these were mainly in the interests of the richer section of the peasantry, while the sharecropping tenants were subjected to eviction at will.⁴⁰ However, the introduction of commercial crops, immigration of labourers from other areas, the use of advance for promoting particular productions and the formalization of land records, all these helped to create markets for land, manpower and credit in the rural areas and enhanced the mobility of factors, goods and services. These also led to the growing monetization of the economy, increasing production for the market, and the differentiation of the peasantry, which, as noted earlier, facilitated rural-urban migration and the growth of towns.

Exposed to these forces, the rural areas underwent significant

transformation in terms of size distribution of villages in different areas. Whereas in the pre-colonial days the villages were small and their population were more widely dispersed, under the colonial regime the tendency was for them to become more compact and for the rural population to concentrate in a smaller number of larger rural settlements. As the survey in the 'Evolution of Settlements' shows, the proportion of villages with population smaller than 500 was drastically reduced, while the proportion of those with more than 2000 inhabitants showed a sharp increase, and the total number of villages fell, the average village population now becoming much higher.⁴¹ This tendency was more marked in areas nearer to the bigger urban centres, particularly Calcutta city. The largest amongst those eventually became towns.

While there is no scope for a detailed discussion on post-independence land reform in this paper it is sufficient to note that the abolition of large scale absentee landlordism in the early fifties created a basis for land-based urbanization, while the inability or unwillingness of the state government to effectively apply the ceiling legislations or to stamp out various abuses of the legislations limited the scope for such development. In contrast, a more effective land reform implementation since 1977 under the Left Front government, coupled with the establishment of a powerful panchayet system at the grassroot level have, in addition to bringing down unwarranted rural-urban migration induced by natural calamities and/or evictions, also laid the foundation for agricultural growth, as reflected in increased production, more marketed production particularly of jute, potato and oilseeds, and greater productivity. All these, by strengthening agriculture, would also augment the process of urbanization based on agricultural prosperity in years to come.⁴²

So far we have mainly discussed the economic impact of towns on the rural areas. No less important are the cultural ones, which reshape tastes and preferences in favour of urban goods, transform values which now become more individualistic and hasten the disintegration of the joint family system and lead to the growth of new types of organizations, such as trade unions and political parties. Some of these have been discussed in P. K. Dasgupta's paper.⁴³

VII Urban impact of urban growth

How does urban growth influence urban areas themselves ? Here

such an impact would be examined in terms of the following sets of indicators : demographic, occupational, infrastructural and social.

Demographically, a number of tendencies are clearly in evidence. One of the key demographic variables is of course gender-ratio. Other things being equal, the larger the urban centre the smaller is usually the proportion of women. Similarly, the more industrialized the town the less would be the relative numerical importance of the women in the population, while towns closer to agricultural areas and having a non-industrial character would have a higher share of women in the population. Further, a town with a larger migrant population would adversely affect the proportion of women in the population. All these features are inter related : the proportion of migrants is likely to be higher in larger and more industrialized urban centres, and the former are likely to be adult males who would leave their families behind in the native villages. Among the migrants, more of inter-state migrants are likely to be found in larger and/or more industrialized urban centres, and they are even less likely to bring their wives than their intra-state counterparts. For all these reasons, the gender-ratio declines from 919 in case of Class III towns, to 914, and 793 in cases of Classes II, and I, with Calcutta city having a ratio of 712, one of the lowest among the cities of India. Similarly, even within Calcutta Urban Agglomeration, one finds wide variations in gender-ratio, with an industrial town such as Bhatpara having a figure as low as 760, compared to 905 in case of Baruipur on the fringe, which has a very low percentage of migrants and whose economy is no more than the projection of the surrounding agricultural economy.

Perhaps, more important from our point of view is what happens to this ratio over time. Here the trend is unmistakably towards a more balanced ratio. This happens because eventually migrants marry or bring over their families to the destination, their children produce a more balanced ratio between genders, natural growth becomes increasingly more important than migration and even the hitherto industrialized towns become increasingly tertiarized. In the case of the Calcutta city, the gender-ratio improved from 456 in 1941 and 580 in 1951 to 636 in 1966 and 712 in 1981. In the case of Durgapore, which showed a very low proportion of women in 1961, at 338 per thousand, immediately after it was founded, produced a more balanced ratio of 822 in 1981. This tendency has been amply confirmed in the case of Jamshedpur, the oldest steel town in the

country, with a highly unbalanced gender ratio in 1911, but which improved to 846 in 1981, by when it achieved a better balance between the migrants and locals and shed quite a bit of its industrial character.⁴⁴

Comparable to gender-ratio in indicating the character of a town is the dependency ratio, that is the proportion of children (below 15) and the aged (above 55) in the population. For the reasons mentioned above, one would expect the high dependency ratio to be correlated with the gender-ratio, and to achieve stability and maturity in the future as the balance between various age group approximates that existing in the general population.

There is a secular tendency towards nucleation of households, as reflected in the average family size. This is partly because of the social forces which influence the disintegration of the joint family and partly due to the fact that, unlike agricultural-based activities which can be conducted by the whole family together, urban jobs tend to encourage the splitting up of the family for work in various places. However, average family size is likely to be small also in areas dominated by migrants or having an industrial character. On the one hand, with the decline in the proportion of migrants and in the importance of industrial activities there would be a tendency for the average size to grow, while on the other hand the secular tendency towards nucleation, for social and job reasons, would exert a pull from the opposite side. On balance, the average family size is expected to decline over time.

Another noticeable demographic tendency is for the migrants to be increasingly concentrated in the peripheries of the towns, which would show a higher rate of growth than the town itself, and would eventually become a part of the town. Saturation of the core, accompanied by the expansion of the periphery, until the periphery itself becomes a part of the core and the migrants begin concentrating just outside the erstwhile periphery, is already noticed in cases of Calcutta and the Calcutta Urban Agglomeration.

Coming to occupational characteristics, we have already noted that the main inspiration for urbanization in West Bengal came from industrial activities—which explains the concentration of urban population in Calcutta Urban Agglomeration and Asansol-Durgaporesubdivision of Burdwan. In other areas, urban activities are strongly correlated with trading or services, as in the case of Siliguri or Malda. In the case of the backward western districts, as the paper

by Sudeshna Ghosh Roy shows, no strong correlation exists between urbanization and any of the occupational variables.⁴⁵

However, even in the industrial cities and towns, generally the tendency is towards increasing tertiarization of the occupational structure. A good example is provided, again, by Durgapore, where, to start with, more than 83% of the workers were engaged in manufacturing and construction, as revealed by the 1961 data; but by 1971, the proportion engaged had declined from 24.40% to a small 4.25%, with the completion of most of the projects, while the pace of industrial employment declined to reduce the proportion engaged in manufacturing from 59% to 56%. The main beneficiaries were the tertiary activities, which registered an increase from 16.87% to 31.29%.⁴⁶ In the case of the older industrial towns, the decline in even more remarkable; practically everywhere tertiary sector employment has overtaken that in the secondary sector. What two decades earlier was a town with a predominantly working class population is now crowded with shop-keepers, office-goers and hawkers and salesmen of various types.

This tertiarization process partly follows the natural pattern of growth of a town; as the dominance of adult male migrant workers in the population leads to a more balanced age-gender distribution of population, and the growth of population outpaces the creation of job opportunities in the industries. Besides, the increase in population creates a high effective demand for a variety of consumption goods and services, which in their turn bring more people and create further demand for other goods and services. Consequently, all these lead to the expansion of the tertiary sector. But that is not all.

No less important as an explanation of tertiarization is that it is an indication of gross underutilization of labour power and the inability of the urban economy to provide jobs for those. In most cases such tertiary activities involve various types of self-employment, which are usually labelled as 'informal sector activities', and which are undertaken to avoid direct unemployment. It is a direct consequence of urbanization without industrialization, when a vast section of the town population is forced to take whatever comes its way and at whatever remuneration, just to keep itself afloat. These should be distinguished from the tertiarization process revealed in the developed countries which arise from a change in the structure of the economy and are not means of avoiding direct

unemployment. In other words, a higher level of tertiarization in the Indian context, far from indicating the maturity of the economy, *à la* Colin Clark, shows that the health of the urban economy is far from sound.

Accompanying this trend is the tendency towards a decline in the work participation rate—the larger the town the lower is likely to be the participation rate, other things remaining constant. The participation rate in the towns is below that in the rural areas. This is largely because the opportunities for the employment of women and children are more restricted in the urban settlements. Whereas in the rural areas it is possible for women working in family farms to combine work in the farm with child care and domestic duties, and to follow a flexible time schedule for work, in the more formal and less flexible urban job market with stricter working hours and greater distance between the work place and residence, it is harder for women to participate. This is apart from the fact that certain biases operate against their employment which is generally restricted to some specific 'female occupations'. It is equally true that more often than not the contribution of women in economic activities in the towns is underestimated. While the sweetmeat-vendor in the trains is a man, what is overlooked is that the women and children back home have been mainly responsible for this production. Many women work at home (e.g. as tailors) for large enterprises at very low wages and without any of the benefits given to the workers in the organized industries, simply because it enables them to combine work with domestic duties. For the single women and widows from poor background domestic service is a major occupation, while nursing, teaching etc. are some of the other jobs in which women figure prominently.

Another noticeable feature of the urban job market is that it contains, in several cases, a substantial proportion of cultivators and agricultural labourers. In the case of Ghatal it was as high as 48% in 1971, and only declined to about 42% in 1981.⁴⁷ In fact, the share of primary sector among workers increased, in the case of each town size-class, the tendency being more pronounced in the case of smaller urban areas, during 1961-71.⁴⁸ Even in Nadia district, which is partly covered by Calcutta Urban Agglomeration, the proportion of cultivators and agricultural labourers increased from 6.85% to 12.05% during 1961-71.⁴⁹ This, as far as one can understand, is less a reflection of better job prospects in the rural areas than the fact that

the urban job market is saturated, leaving many with no alternative but to sell their labour in the surrounding rural areas.

This of course raises another problem regarding the analysis of occupation data for characterizing towns—that those living in a town may be working elsewhere, as agriculturists (in the case of Ghatal) or industrial workers or clerks in another, perhaps larger, urban settlement (as in the case of Chandannagore). In other words, the occupational pattern of the town dwellers might not necessarily tally with the occupational distribution among workers within the town itself.

Another important feature relating to urban employment is the prevalence of open unemployment among the local middle class, many of whom with some educational background. As a consequence, one would normally find a higher level of registered unemployment among the local population than among the migrants. This usually follows from two factors : First, the fact that the immigrants cannot afford to be unemployed for a long period, and if that happens they would return to their native places; those remaining and not finding jobs of their choosing would accept anything which comes their way or would opt for the informal sector where the entry conditions are more flexible. In contrast, a local youth, backed by his joint family, can afford to wait until a job more to his satisfaction is secured. Second, for the educated this consideration would weigh more heavily, and generally waiting would lead to better jobs.

What this discussion on occupations shows is that the urban job market in West Bengal is already saturated, and even the informal sector jobs do not always permit a survival-income. The net outmigration from Calcutta city, and the decline in inter-state population movement is also a reflection of this phenomenon. This in turn, is a reflection of the overall economic situation, the fact that industrial growth is taking place at a pace which is too low even to absorb those who are already in the towns, not to speak of those in the rural areas who are aspiring to enter the urban labour market.

As for infrastructures, here again one finds a widening gap between the needs for roads, drains, drinking water, sanitation and solid waste disposal arrangements and the existing capacity of the civic bodies to supply those. Most civic bodies are heavily dependent on the state government for financial support, and find it hard to take independent initiative, while even a most generous contribution

from the state budget would not even touch the bare surface of their problems. Leaving aside Calcutta city, even in the other municipalities within Calcutta Urban Agglomeration the per capita water supply is on the average less than 18 gallons, (which is a progress over the much lower figure of around 12 gallons 15 years ago), the average length of pucca roads is only 7.71 kilometres per square kilometre of area, the average length of pucca drain is only 4.39 kilometres per square kilometre area, the sanitary system is based on service privies which are emptied manually by sweepers carrying the nightsoil in buckets, and the solid waste disposal system is conspicuous by its absence in most places. If this is the situation in Calcutta Urban Agglomeration the conditions are far worse in the other municipalities outside Calcutta Urban Agglomeration area. Increase in urban population, without corresponding additions to civic facilities, is leading to a serious deterioration in civic services in many of these municipalities.⁵⁰

While there is some semblance of a civic infrastructure in the municipalities, the non-municipal urban areas and rural areas along highways, main water-courses and railway lines and near the major urban centres are witnessing a rapid, but chaotic development of urban sprawls, which are closing future options for road-building, drainage, solid waste disposal, water treatment and the construction of other civic facilities. Since these areas are not under municipal authorities, land-use and house-construction activities here do not conform to standardized municipal norms, and therefore jeopardize the possibilities of organized urban development in the future. These are often areas of fastest growth, where irreversible changes in land-use and social environment are taking place which, unless stopped now, would make the tasks of town-planners in future that much harder.⁵¹

Lastly, the social tensions. These take many different forms—from family conflicts and quarrels between neighbours to anti-social activities, communal conflicts and spontaneous outbursts of violence sparked off by innocuous incidents. While West Bengal rightly boasts of a healthy climate in terms of communal relations, and of the virtual absence of riots etc. which are almost a regular feature of urban life in several states, it would be wrong to assume that social tensions are altogether absent from the state. In many cases such tensions have been channelized through political organizations and mobilizations, but it should be recognized that

such tensions have their roots in the social and economic structure of the urban society. Overcrowding, lack of open space, deteriorating civic facilities, and declining job opportunities for the urban youth entering the job market—these are recipes for various kinds of tension, which get reflected in anti-social activities, spontaneous acts of mass violence and sometimes also in chauvinist expressions of views, some cases even by the highly educated élite of considerable intellectual standing.⁵² There are also sporadic attempts from time to time to incite communal riots or to make the workers from other states the target of attack. Though, thanks to the vigilance of the Left Front cadres, such attempts are usually frustrated, there is no room for complacency. In a situation of declining economic opportunities, an identifiable social group of 'outsiders' can easily become a target, at the least for verbal aggression. The tendency of the migrants in large cities to concentrate in certain areas and in certain types of jobs, makes it easier to identify them as separate groups.⁵³ In many cases, migrants tend to retain their rural cultural values, traditions and life-style, and make limited effort to integrate with locals. What this shows is that urban growth non-synchronized with the expansion of the economic base is fraught with all kinds of dangers, and hence the need for a strategy of urbanization which takes those factors into account.

VIII A strategy for urban growth

One of the first points to be stressed is the need for decentralized urbanization, away from the heavy concentration of urban population and activities one finds in Calcutta Urban Agglomeration today. The pattern of urbanization should be altered in favour of one which could have emerged but for the colonial intervention and linked urbanization with internal economic developments, particularly in the rural areas. Such an approach would entail the development of a large number of smaller urban centres, and a uniform orderly hierarchical structure of urban centres from the very large to the very small, the latter being very close to the bigger villages in size and character.

This strategy would be to the advantage of both the Calcutta metropolis and the smaller urban centres and the rural areas in the rest of the state; while the present state of highly unequal distribution of urban population, which makes some parts of the state 'over-urbanized' but—keeping the rest in a very rural state, is

good for neither. We have already noted how the overcrowding in the towns is telling on its civic infrastructure and putting unbearable pressure on the labour market, leading to various types of social tensions with dangerous portents. In the case of Calcutta city, the situation has now reached a level where the process of 'net-outmigration' has set in as the carrying capacity of the civic system has become more than fully extended. While the immigration to other parts of the Calcutta Urban Agglomeration is continuing, our brief account indicates the pressure to which it is subjected—including the phoney tertiarization process and declining work participation rates which characterize their job markets.

If this is the situation with the Calcutta metropolis, this is worse with the other areas of the state which, through migration, are losing some of their best talents and are also suffering in terms of a misallocation, of critical social inputs in favour of the metropolis. Swati Ghosh's paper shows the very high degree of inequality in the distribution of medical and educational facilities between the more and the less developed districts, the former being largely coterminous with more urbanized mainly Calcutta Urban Agglomeration and Burdwan; though, hopefully, her paper shows that, thanks to the greater initiative taken by the state government since the late seventies, such inequality is declining.⁵⁴ Nevertheless, the fact remains, that as long as this disparity between Calcutta and the rest of the state continues, no matter what policies are pursued, migration towards Calcutta Urban Agglomeration can not be avoided.

There is often a tendency to focus on the remedies which would help to solve the problems of housing, transport, infrastructure and employment of those living in Calcutta Urban Agglomeration. What those advocating such a policy fail to grasp is that it is a self-defeating exercise, and all its targets would be negated by further flows of migration induced by such measures which would have the effect of widening the disparity between Calcutta Urban Agglomeration and the rest of the state. Further, such a policy would make little economic sense. If a large number of hospital beds and seats in the colleges and universities in Calcutta are occupied by those coming from other districts, would it not be cheaper to build those hospitals and colleges in the places from which they come? This would additionally help to avoid the wastage of time, effort and money spent by the recipients of such facilities. A major problem in following such a

policy, however, is that the skilled manpower needed for running these medical and educational institutions—good doctors, teachers etc.—are not usually attracted to those areas, and would rather prefer to be in Calcutta Urban Agglomeration. This again is another example of the 'egg-chicken paradox': doctors do not want to go because there is no adequate provision for the schooling of their children while teachers do not want to go because the facilities for medical treatment are inadequate, and other professionals and civic servants do not want to go because of the absence of these and other facilities. A beginning has to be made at some point; otherwise things would remain as they are forever.

There is another example of the effectiveness of a policy of investing elsewhere to make life in Calcutta Urban Agglomeration better. Whereas until recently a major cause of cityward migration was periodic natural disasters such as floods and droughts, since 1978 such population inflow has been reduced to a trickle following a better management of disaster-relief through the local level panchayets, and the virtual ending of eviction of tenants by land-owners through a rigorous implementation of the land reform legislations. The distribution of ceiling-surplus land to 1400000 landless peasants, the conferment of ownership rights on hutments to the landless squatting on the land of others, and the implementation of minimum wages for the agricultural labourers, along with the creation of jobs through food-for-work type programme during lean seasons, all these have reduced the propensity of the village poorest to pick up their belongings and taking to the road during disasters—natural or economic. Making rural life better would be a cheaper and more effective way of solving the problems of overcrowding and insanitary conditions in the city's slums, by inducing them to remain in the villages. Investment in land reforms and strengthening the local level village self-governments by giving them more resources, authority and responsibility should therefore be seen as an alternative to spending the same amount of money for urban renewal and slum-improvement programmes for the same group of people after their forced migration.

What we are advocating is not by any means an argument against rural-urban migration or urban development as such. We do not share the views of those who counterpose the needs of urban development against those for rural development. There is in fact no conflict between the two. Rural development programme, however

directed, is bound to lead to the emergence of new towns and to the growth of the old ones; as some of the big villages become bigger and eventually pass the 75% occupational threshold. Such urbanization is welcome and is positively linked with rural progress. What we are opposed to is unplanned migration towards the larger urban centres, induced by disasters and various types of inequalities, which erodes the economic and social base of the rural economy while adding to the mounting pressure on the meagre civic facilities of the former. Promoting urbanization—in terms of the growth of a large number of smaller towns, and of bringing about a structured ordering of towns by size-categories to ease the flow of goods and services—should actually be an important objective of a positively oriented urbanization strategy.

Nor would this policy of decentralized urbanization imply letting Calcutta further decline in order to promote urban development in other areas. Apart from everything else, Calcutta Urban Agglomeration accounts for nearly 10 million people, and its population would reach a figure of around 15 million by 2011, assuming that the entire growth would be without further migration and at a rate which approximates the natural growth rate in the state. Such colossal population can not be easily shifted elsewhere; and hence, their special needs would have to be taken care of. While we favour a decline in the proportionate demographic importance of the Calcutta Urban Agglomeration, the absolute population of this metropolis might continue to grow for many years to come. In this situation, even to maintain civic facilities at the present per capita level would involve massive financial investment, which cannot be avoided. Furthermore, even in a more decentralized urban structure, a metropolis would continue to play an important political, social, economic and cultural role. A metropolis like Calcutta is not a simple multiple of a smaller urban entity—its complexity, pivotal role in maintaining linkages with the key sectors of the economy and with other areas of the state and of the eastern region as a whole cannot be overlooked. An overgrown head is a severe burden, but the solution does not lie in chopping it off but in making it more efficient and vigorous by lightening its burden. Special attention would have to be given to Calcutta's civic problems, while promoting policies such as establishing alternative growth centres in other parts of the state to reduce its numerical and economic dominance.

Given the industrial character of most of the municipalities in the Calcutta Urban Agglomeration, their development is closely linked with the possibilities of industrial recovery. As long as the key industries like jute, cotton textiles, and engineering continue to suffer from recession, and a large number of units remain sick or closed, there are limits to what can be done by infrastructural development alone. Here, along with large scale investment in water supply, sanitation, drainage etc. would be needed investment of even much higher order in industries, boosted by suitable policy changes in order to create a favourable climate for economic growth. The 'freight equalization policy' of the central government with respect to steel denies the eastern region of its locational advantage in terms of its proximity to coal and iron mines, while it has to pay full transport price for the raw materials required for its own industries. A revision of this policy, a more generous allocation of plan fund for power and other projects, a better distribution of industrial licenses in place of a small proportion now given to the eastern region (which is less than what is given to an individual state like Maharashtra or Gujarat), all these would go a long way towards rejuvenating the economy of the region and would also ease the task of handling the civic issues confronting Calcutta's core city as also the other municipalities.

Coming to the areas outside Calcutta Urban Agglomeration a strategy of decentralized urbanization would imply several sets of policies :

First, the encouragement to be given to the development of larger urban centres in other districts. The Durgapore-Asansol complex is already the major urban entity outside Calcutta Urban Agglomeration, and its growth rate is promising. Success with industrial recovery in the region would also boost its economy and growth rate. The complimentary part of this complex is the rich agricultural land of the rest of Burdwan which can lead to a dynamic agriculture based urbanization. In the north, Siliguri city, with its locational advantages in relation to north eastern India, Himalayan states and Darjeeling tourist resorts as also to the tea-timber trade of the area, is already showing unmistakable signs of growth. Here, as also in the case of Malda town, the main force behind growth would be trade and transport. The latter can take full advantage of its location to grow, supported by the industrial development in Farakka power township on the other side of the river. On the southern part of the

state the Haldia-Kolaghat area, with a refinery, a fertilizer unit, a sea-port of Calcutta, a petrochemical complex (to be constructed) and a power-generation unit, supported by the railway city of Kharagpur not far away, has a tremendous potential for growth, backed, as in the case of Asansol-Burdwan, by a thriving agriculture. Lastly, the Falta free trade zone on the south of Calcutta metropolis, on the other side of the river Ganga from Haldia, should provide another focus for industrial-urban development, like Kandla in Gujarat. These are the major identifiable 'countermagnets' whose growth should be accorded a high priority by the state government.

Second, the growth of district towns, mostly class-two towns with population around 60000 to 80000, which are already important centres of administration, education and medical facilities. Many of these towns have a long recorded history of three to five hundred years, and their growth is a testimony to the locational advantages they enjoy. In most cases these towns were selected as administrative centres by the British because of their established importance. It would be easier to build on those than to construct new townships. In most of these towns the civic facilities are highly inadequate, and development options have been closed by haphazard growth of settlements. Extensions to these towns should be suitably planned now, in order to avoid the mistakes of the past.

Third, and in a sense the most important from the point of view of a policy of decentralized urbanization, is to promote urbanization with a rural focus by making the municipalities the focal point of rural and regional development in the area. This policy would be in marked contrast with the priorities usually followed by the municipalities, that is concern with purely civic issues covering the people already in the town, e.g., water supply, roads, drainage and garbage disposal. Not that such activities are unimportant, but these should be followed within the context of a newly defined broader role in promoting rural development in the area. Such a shift in emphasis would also make sense for two other reasons. One, rural prosperity would spill over to the urban areas, as surpluses would be converted into better and properly maintained houses, more shops, markets and industries and various social activities by the urbanites with rural connections. Two, this would also boost municipal finance which is handicapped by an excessive dependence on state subsidy and an inelastic property tax. A thriving urban economy would make it easier for the municipalities to collect contributions in

various forms, as taxes and non-tax revenues, and to use those for building the necessary infrastructure. Without such economic change there are severe limits to what can be achieved even in terms of improvements in civic services on the basis of the shoestring budget they presently command.

This would involve promoting a wide range of activities to make it possible for the municipalities to play their assigned role in regional development. Here the objective would be to undertake those activities which are vital for agriculture and rural industries but which no individual village would be in a position to afford. In other words, the municipal towns would provide the 'scale' for the village-based activities, e.g. repairing units for the agricultural machineries, warehouses for fertilizers and other inputs and also for the outputs, banks, insurance companies, artificial insemination centres, chilling plants, fruit processing units, feed plants. Given the role these towns would play in the marketing of goods a number of markets would require to be set up and maintained, which would also help the agriculturist to get a better price for his toil and free him considerably from dependence on brokers and other middlemen. Such a policy would also involve the establishment of a network of roads which integrate the municipal town with its rural hinterland, again, in contrast with the tendency to link the rural areas only with the major towns and cities.

The study by Tapan Banerjee shows that, judged by per capita municipal expenditure, the level of activity of the West Bengal municipalities is almost half the national average—Rs. 28.12 as opposed to Rs. 53.14—and is about one-fourth of that spent in the municipalities of Maharashtra (Rs. 113.01).⁵⁵ This indicates the long history of neglect of the municipal administration in the state which, until recently, were mostly run by nominated bodies. Another major feature is the huge revenue gap, which accounts for 37% to 51% of the total expenditure, and makes the municipalities heavily dependent on the state exchequer for functioning. Further, an analysis of the income side shows that 73% of the municipal revenue comes from property tax, and another 12% come from other taxes, while non-tax revenues account for the remaining 15%. For the **municipalities to play a key role in rural development a greater effort** would be necessary to raise finance from its own sources, and to raise more of it from non-tax resources; this too would be easier once the perspective for municipal work changes and a wide range of

activities is promoted on a commercial basis, may be supported by institutional credit.

Such self-reliance in financial terms would entail large-scale popular participation in municipal activities. Over the past five years twice civic polls have been held, whereas in the preceding 15-20 years this was not held even once. This is a welcome change, and would make it easier to redefine municipal role with popular support. Furthermore, the distribution of power within the civic body has been shifted in favour of the elected element, while the administration has been strengthened by the provision of officers in charge of administration, finance, health and engineering from the state budget. Within the municipalities, efforts are being made to further democratize decision-making by making sub-units (such as boroughs) self-reliant in certain matters. Besides, municipalities have now been made members of the district-based planning committees, in order to integrate their development activities with those in the rest of the district; which would indeed strengthen the possibility of making the municipalities focal points for rural and regional development.

Abhijit Datta's study of municipal administration raises the issue of the criteria for municipalization.⁵⁶ As the law stands at the moment, for an urban area to be municipalized the population would have to be a minimum of 10000, and the density to be at least 2000 per square mile, that is double the minimum criteria fixed for defining an urban area. While such criteria would make economic sense, since it would avoid the costs of building the municipal infrastructure for the tiny urban areas, this might lead to greater difficulties of planning at a latter date since the non-municipal areas are not guided by municipal norms of building and land use. By the time these areas come to satisfy the criteria for municipalization, the anarchic character of these settlements would make the tasks of urban planners a nightmare. This is an issue on which the decision-makers would need to ponder over, whether a more liberal policy of municipalization would not in the end turn out to be cheaper and more efficient.

Finally, this would still leave us with the problems of semi-urban large rural settlements, such as bandars and ganjas, many of which are also block headquarters, and which are in the process of being urbanized. Here too, even before they obtain recognition as urban areas, it would be necessary to introduce land-use and building norms through the local level panchayets, in order to make the task of future urban planning somewhat easier.

State-wise urban characteristics 1971 and 1981

| State | Total population (millions) | | Urban population (millions) | | Urban population as proportion of total population | | No. of towns/ agglomerations | Proportion of urban population in Class-I | Population growth 1971-81 | | Urban gender- ratio-1981 | | |
|-------------------------------------|--------------------------------|--------|--------------------------------|--------|--|-------|------------------------------------|---|------------------------------|-------------|-----------------------------|-------------|------|
| | 1971 1981 | | 1971 1981 | | 1971 1981 | | | | 1971-81 | | 1971-81 | | |
| | 1971 | 1981 | 1971 | 1981 | Rank | 1981 | | | 1981 | urban towns | urban towns | urban towns | |
| Andhra | 43.50 | 53.59 | 8.40 | 12.46 | 19.31 | 23.25 | 8 | 234 | 53.69 | 48.26 | 64.59 | 948 | 940 |
| Bihar | 56.35 | 69.82 | 5.63 | 8.70 | 10.00 | 12.46 | 17 | 179 | 54.12 | 54.40 | 84.10 | 833 | 816 |
| Gujarat | 26.70 | 33.96 | 7.50 | 10.56 | 28.08 | 31.08 | 3 | 220 | 57.92 | 40.82 | 66.54 | 905 | 884 |
| Haryana | 10.04 | 12.85 | 1.77 | 2.82 | 17.66 | 21.96 | 9 | 77 | 56.64 | 59.16 | 603.34 | 850 | 837 |
| Himachal Pradesh | 3.46 | 4.24 | 0.24 | 0.33 | 6.99 | 7.72 | 20 | 46 | - | 35.25 | - | 799 | - |
| Karnataka | 29.30 | 37.04 | 7.12 | 10.71 | 24.31 | 28.91 | 4 | 250 | 58.60 | 50.39 | 72.61 | 926 | 912 |
| Kerala | 21.35 | 25.40 | 3.47 | 4.77 | 16.24 | 18.78 | 12 | 85 | 53.13 | 37.63 | 72.79 | 1022 | 1004 |
| Madhya Pradesh | 41.65 | 52.14 | 6.78 | 10.59 | 16.29 | 20.31 | 11 | 303 | 46.84 | 56.07 | 62.27 | 883 | 877 |
| Maharashtra | 50.41 | 62.72 | 15.71 | 21.97 | 31.17 | 35.03 | 1 | 276 | 75.24 | 39.82 | 48.61 | 851 | 828 |
| Manipur | 1.07 | 1.41 | 0.14 | 0.37 | 13.19 | 26.44 | 7 | 32 | 41.70 | 163.77 | 55.07 | 968 | 976 |
| Meghalaya | 1.01 | 1.33 | 0.15 | 0.24 | 14.55 | 18.03 | 13 | 7 | 72.26 | 62.74 | 40.99 | 903 | 902 |
| Nagaland | 0.52 | 0.77 | 0.05 | 0.12 | 9.95 | 15.54 | 16 | 7 | - | 133.84 | - | 676 | - |
| Orissa | 21.94 | 26.27 | 1.85 | 3.11 | 8.41 | 11.82 | 18 | 103 | 41.63 | 68.29 | 83.00 | 859 | 818 |
| Punjab | 13.55 | 16.67 | 3.22 | 4.62 | 23.73 | 27.72 | 5 | 134 | 46.40 | 43.66 | 64.13 | 861 | 840 |
| Rajasthan | 25.77 | 34.11 | 4.54 | 7.14 | 17.63 | 20.93 | 10 | 195 | 46.52 | 57.15 | 74.62 | 884 | 871 |
| Sikkim | 0.21 | 0.31 | 0.02 | 0.05 | 9.37 | 16.23 | 15 | 8 | - | 159.86 | - | 698 | - |
| Tamilnadu | 41.20 | 48.30 | 12.46 | 15.93 | 30.26 | 32.98 | 2 | 245 | 62.19 | 27.78 | 37.62 | 957 | 943 |
| Tripura | 1.56 | 2.05 | 0.16 | 0.22 | 10.43 | 10.98 | 19 | 10 | 58.48 | 38.51 | 31.17 | 961 | 977 |
| Uttar Pradesh | 88.34 | 110.89 | 12.39 | 19.97 | 14.02 | 18.01 | 14 | 659 | 51.49 | 61.22 | 45.47 | 845 | 838 |
| West Bengal | 44.31 | 54.49 | 10.97 | 14.43 | 24.75 | 26.49 | 6 | 130 | 76.84 | 31.61 | 42.48 | 820 | 793 |
| India (including Union Territories) | 528.92 | 658.14 | 106.97 | 156.19 | 20.22 | 23.73 | 3245 | 60.37 | 60.37 | 46.02 | 56.83 | 880 | 861 |

Source : *Census of India 1981*, Paper 2, Rural-urban distribution, Delhi, 1983.

Source : *Census of India 1981*, Paper 2, Rural-urban distribution, Delhi, 1983.

Table 2**Proportion of urbanized population in various districts of
West Bengal : 1971 & 1981**

| District | 1971 | 1981 | Rank in 1981 |
|----------------|-------|-------|-----------------|
| Cooch Behar | 6.83 | 6.91 | 14 |
| Jalpaiguri | 9.60 | 14.08 | 7 |
| Darjeeling | 23.05 | 27.86 | 5 |
| West Dinajpore | 9.34 | 11.14 | 8 |
| Malda | 4.22 | 4.78 | 15 |
| Murshidabad | 8.45 | 9.30 | 9 |
| Nadia | 18.74 | 21.44 | 6 |
| 24-Parganas | 35.15 | 38.90 | 2 |
| Howrah | 41.93 | 45.22 | 1 |
| Hooghly | 26.47 | 29.54 | 4 |
| Midnapore | 7.63 | 8.54 | 11 |
| Bankura | 7.47 | 7.63 | 13 |
| Purulia | 8.26 | 9.00 | 10 |
| Burdwan | 22.78 | 29.65 | 3 |
| Birbhum | 7.03 | 8.33 | 12 |
| West Bengal | 24.75 | 26.49 | 8 |

Source : Government of West Bengal,
Economic Review 1985-86, Calcutta 1986.

Table 3
Yield and rate of production increase in districts of
West Bengal

| District | Rice per hectare (in Kg) 1984-85 | Rank | Index of agricul- tural prodn. in 1983-84 (1971-72—100) | Rank |
|----------------|---|------|---|------|
| Cooch Behar | 1057 | 14 | 112.99 | 13 |
| Jalpaiguri | 1009 | 15 | 124.79 | 10 |
| Darjeeling | 1236 | 12 | 149.62 | 4 |
| West Dinajpore | 1110 | 13 | 118.88 | 12 |
| Malda | 1544 | 10 | 144.80 | 5 |
| Murshidabad | 1576 | 7 | 137.40 | 8 |
| Nadia | 1873 | 4 | 163.42 | 3 |
| 24-Parganas | 1619 | 6 | 144.20 | 6 |
| Howrah | 1901 | 3 | 142.76 | 7 |
| Hooghly | 2119 | 1 | 175.11 | 1 |
| Midnapore | 1548 | 9 | 131.79 | 9 |
| Bankura | 1567 | 8 | 121.17 | 11 |
| Purulia | 1410 | 11 | 110.83 | 15 |
| Burdwan | 1941 | 2 | 165.47 | 2 |
| Birbhum | 1820 | 5 | 112.61 | 14 |

Source : Government of West Bengal, *Economic Review*, 1985-86,
Calcutta, 1986.

Table 4

District-wise data on urban population - 1971-1981

| District | Total Popu- lation (Millions) | | Urban Popu- lation (Millions) | | Proportion of urban population | | Proportion of State's urban population | | No. of Towns | | Growth of total popu- lation | | Growth of urban population | |
|----------------|-------------------------------------|-------|-------------------------------------|-------|--------------------------------------|--------|--|--------|-----------------|------|------------------------------------|------|----------------------------------|------|
| | 1971 | 1981 | 1971 | 1981 | 1971 | 1981 | 1971 | 1981 | 1971 | 1981 | 1971-1981 | Rank | 1971-1981 | Rank |
| Cooch Behar | 1.41 | 1.77 | 0.10 | 0.12 | 6.83 | 6.91 | 0.88 | 0.85 | 7 | 7 | 25.20 | 8 | 26.58 | 13 |
| Jalpaiguri | 1.75 | 2.22 | 0.17 | 0.31 | 9.60 | 14.08 | 1.53 | 2.15 | 8 | 12 | 26.11 | 6 | 84.94 | 1 |
| Darjeeling | 0.78 | 1.02 | 0.18 | 0.28 | 23.05 | 27.86 | 1.64 | 1.94 | 4 | 7 | 28.74 | 3 | 55.58 | 3 |
| West Dinajpore | 1.86 | 2.41 | 0.17 | 0.27 | 9.34 | 11.14 | 1.58 | 1.85 | 7 | 8 | 29.19 | 2 | 54.04 | 4 |
| Malda | 1.61 | 2.03 | 0.07 | 0.10 | 4.22 | 4.78 | 0.62 | 0.67 | 2 | 4 | 26.19 | 5 | 42.88 | 6 |
| Murshidabad | 2.95 | 3.70 | 0.25 | 0.34 | 8.45 | 9.30 | 2.27 | 2.39 | 11 | 13 | 25.94 | 7 | 38.62 | 9 |
| Nadia | 2.22 | 2.96 | 0.42 | 0.64 | 18.74 | 21.44 | 3.82 | 4.42 | 12 | 16 | 33.48 | 1 | 52.65 | 5 |
| 24-Parganas | 8.45 | 10.74 | 2.97 | 4.17 | 35.15 | 38.90 | 27.08 | 28.90 | 60 | 74 | 26.95 | 4 | 40.48 | 7 |
| Calcutta | 3.15 | 3.29 | 3.15 | 3.29 | 100.00 | 100.00 | 28.71 | 22.80 | 1 | 1 | 4.54 | 16 | 4.54 | 16 |
| Howrah | 2.42 | 2.97 | 1.01 | 1.34 | 41.93 | 45.22 | 9.24 | 9.27 | 29 | 35 | 22.35 | 11 | 31.95 | 12 |
| Hooghly | 2.87 | 3.56 | 0.75 | 1.05 | 26.47 | 29.54 | 6.93 | 7.27 | 16 | 26 | 23.60 | 9 | 37.94 | 10 |
| Midnapore | 5.51 | 6.74 | 0.42 | 0.57 | 7.63 | 8.54 | 3.83 | 3.98 | 17 | 19 | 22.05 | 12 | 36.62 | 11 |
| Bankura | 2.03 | 2.38 | 0.15 | 0.18 | 7.47 | 7.63 | 1.38 | 1.26 | 5 | 5 | 16.90 | 14 | 19.40 | 15 |
| Purulia | 1.60 | 1.85 | 0.13 | 0.17 | 8.26 | 9.00 | 1.22 | 1.16 | 7 | 8 | 15.76 | 15 | 26.09 | 14 |
| Burdwan | 3.92 | 4.84 | 0.90 | 1.43 | 22.78 | 29.65 | 8.13 | 9.88 | 22 | 49 | 22.80 | 10 | 59.83 | 2 |
| Birbhum | 1.78 | 2.10 | 0.13 | 0.17 | 7.03 | 8.33 | 1.14 | 1.21 | 6 | 7 | 17.95 | 13 | 39.88 | 8 |
| West Bengal | 44.31 | 54.58 | 10.97 | 14.43 | 24.75 | 26.49 | 100.00 | 100.00 | 214 | 291 | 22.96 | - | 31.61 | - |

Source : *Census of India, 1981*, Paper 1 of 1981, Series 23, West Bengal, Calcutta, 1981; *Census of India*, Paper 1 of 1981 (Supplement), Series 23, West Bengal, Calcutta 1983.

Table 5
West Bengal : District-wise data on urban units, 1981

| District | No. of urban Agglomerations (U.A.) | No. of urban units under U.A. | No. of new towns | No. of promoted towns | No. of high growth towns | No. of low growth towns | Urban Population per town | Rank | Total Population per town | Rank |
|----------------|------------------------------------|-------------------------------|------------------|-----------------------|--------------------------|-------------------------|---------------------------|------|---------------------------|------|
| Cooch Behar | 1 | 2 | 0 | 2 | 2 | 0 | 17477 | 16 | 2530803 | 8 |
| Jalpaiguri | 2 | 4 | 4 | 4 | 1 | 1 | 25903 | 12 | 183924 | 11 |
| Darjeeling | 0 | 0 | 3 | 2 | 1 | 1 | 40053 | 4 | 143776 | 13 |
| West Dinajpore | 2 | 3 | 1 | 4 | 3 | 1 | 33445 | 8 | 300345 | 5 |
| Malda | 1 | 3 | 2 | 0 | 0 | 0 | 24299 | 14 | 508752 | 1 |
| Murshidabad | 3 | 6 | 2 | 3 | 3 | 1 | 26491 | 11 | 284836 | 7 |
| Nadia | 3* | 7* | 4 | 9 | 5 | 1 | 39885 | 5 | 186063 | 10 |
| 24-Parganas | 4* | 8* | 14 | 21 | 24 | 9 | 56387 | 2 | 144956 | 12 |
| Calcutta | 1** | 107** | (22) | 0 | 0 | 1 | 3291655 | 1 | 3291655 | 4 |
| Howrah | 1* | 2* | 7 | 14 | 15 | 0 | 38210 | 6 | 84499 | 16 |
| Hooghly | 2* | 3 | 10 | 2 | 4 | 0 | 40337 | 3 | 1136531 | 14 |
| Midnapore | 3 | 6 | 2 | 5 | 3 | 1 | 30211 | 9 | 353887 | 3 |
| Bankura | 0 | 0 | 0 | 1 | 0 | 1 | 36234 | 7 | 474841 | 2 |
| Purulia | 1 | 2 | 1 | 1 | 0 | 2 | 20862 | 15 | 231929 | 9 |
| Burdwan | 8 | 40 | 27 | 3 | 8 | 3 | 29095 | 10 | 98149 | 15 |
| Birbhum | 0 | 0 | 1 | 3 | 3 | 0 | 24932 | 13 | 299251 | 6 |
| West Bengal | 32 | 193 | 78 | 74 | 72 | 22 | 49600 | - | 187236 | - |

Source : Based on *Census of India, 1981*.

* Excluding areas under Calcutta Urban Agglomeration.

** Including parts of other districts. Its total of 107 urban units are divided among the districts as follows : Calcutta-1, 24-Pargannas-56, Howrah-29, Hooghly-19, Nadia-2.

Table 6

West Bengal district-wise size-class distribution of urban units, 1981

| District | No. of urban units | | % of municipal towns | No. of urban units in size-class | | | | | | Percentage of urban population in size-class | | | | | |
|--------------|--------------------|----|----------------------|----------------------------------|----|-----|----|----|----|--|-------|-------|-------|-------|------|
| | | | | I | II | III | IV | V | VI | I | II | III | IV | V | VI |
| Cooch Behar | 7 | 2 | 28.57 | 0 | 1 | 0 | 3 | 1 | 2 | 0 | 55.08 | 0 | 31.35 | 5.85 | 7.72 |
| Jaipauri | 12 | 2 | 16.67 | 0 | 2 | 3 | 4 | 3 | 0 | 0 | 44.34 | 30.45 | 18.30 | 6.91 | 0 |
| Darjeeling | 7 | 4 | 57.14 | 1 | 1 | 1 | 2 | 1 | 1 | 54.86 | 20.28 | 10.20 | 10.35 | 3.11 | 1.20 |
| W. Dinajpore | 8 | 2 | 25.00 | 1 | 1 | 3 | 0 | 3 | 0 | 42.05 | 22.48 | 28.36 | 0 | 7.11 | 0 |
| Malda | 4 | 2 | 50.00 | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 81.29 | 0 | 0 | 14.64 | 4.07 |
| Murshidabad | 13 | 7 | 53.85 | 0 | 1 | 5 | 5 | 1 | 1 | 0 | 27.56 | 45.44 | 24.79 | 1.52 | 0.69 |
| Nadia | 16 | 6 | 37.50 | 1 | 4 | 4 | 5 | 2 | 0 | 18.62 | 48.20 | 20.66 | 10.27 | 2.25 | 0 |
| 24-Parganas | 74 | 31 | 41.89 | 11 | 13 | 18 | 19 | 11 | 2 | 54.68 | 22.86 | 13.80 | 6.32 | 2.25 | 0.19 |
| Calcutta | 1 | 1 | 100.00 | 1 | 0 | 0 | 0 | 0 | 0 | 100.00 | 0 | 0 | 0 | 0 | 0 |
| Howrah | 35 | 2 | 5.71 | 2 | 1 | 3 | 16 | 10 | 3 | 65.80 | 4.12 | 5.98 | 17.28 | 5.76 | 1.06 |
| Hooghly | 26 | 11 | 42.31 | 3 | 7 | 1 | 5 | 8 | 2 | 33.98 | 48.53 | 3.22 | 7.81 | 5.93 | 0.53 |
| Midnapore | 19 | 9 | 47.37 | 1 | 2 | 5 | 5 | 4 | 2 | 26.65 | 29.32 | 25.64 | 11.70 | 6.30 | 0.39 |
| Bankura | 5 | 3 | 60.00 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 52.39 | 26.21 | 16.97 | 4.43 | 0 |
| Purulia | 8 | 4 | 50.00 | 0 | 1 | 1 | 4 | 2 | 0 | 0 | 44.08 | 12.95 | 35.70 | 7.27 | 0 |
| Burdwan | 49 | 6 | 12.24 | 3 | 3 | 4 | 21 | 13 | 5 | 46.33 | 13.46 | 10.87 | 21.02 | 6.92 | 1.40 |
| Birbhum | 7 | 4 | 57.14 | 0 | 0 | 5 | 1 | 0 | 1 | 0 | 0 | 91.28 | 8.61 | 0 | 0.11 |
| West Bengal | 291 | 96 | 32.65 | | | | | | | 55.49 | 19.72 | 11.83 | 9.18 | 3.29 | 0.49 |

Source : Based on Census of India, 1981.

Table 7
States : urban units per total and urban population, 1981

| State | No. of agglomer- ratio | No. of urban agglomer- ratio | No. of urban units | urban popula- tion per unit | Rank | Total popu- lation per urban unit | Rank | Rank in terms of % of city popula- tion | Rank in popula- tion growth | Rank in gender ratio (urban) | Rank in gender ratio (city) | % of urban popu- lation |
|------------------|---------------------------|------------------------------------|-----------------------|--------------------------------------|------|--|------|--|-----------------------------------|------------------------------------|-----------------------------------|----------------------------------|
| Andhra | 4 | 230 | 253 | 49240 | 18 | 211828 | 17 | 10 | 12 | 5 | 5 | 8 |
| Bihar | 16 | 280 | 219 | 39721 | 16 | 318827 | 20 | 9 | 10 | 16 | 16 | 17 |
| Gujarat | 30 | 220 | 257 | 35188 | 12 | 132144 | 9 | 8 | 14 | 7 | 8 | 3 |
| Harayana | 4 | 77 | 85 | 33198 | 10 | 151187 | 10 | 7 | 7 | 14 | 13 | 9 |
| Himachal Pradesh | 1 | 46 | 48 | 6816 | 2 | 88283 | 3 | - | 18 | 18 | - | 20 |
| Karnataka | 7 | 250 | 281 | 38118 | 15 | 131827 | 8 | 5 | 11 | 6 | 6 | 4 |
| Kerala | 9 | 85 | 105 | 45437 | 17 | 241935 | 18 | 11 | 17 | 1 | 1 | 12 |
| Madhya Pradesh | 51 | 303 | 324 | 32681 | 9 | 160921 | 12 | 13 | 9 | 10 | 9 | 10 |
| Maharashtra | 14 | 276 | 307 | 68622 | 20 | 204284 | 15 | 3 | 15 | 13 | 14 | 1 |
| Manipur | 0 | 32 | 32 | 11663 | 3 | 44105 | 2 | 16 | 1 | 2 | 3 | 7 |
| Meghalaya | 1 | 7 | 12 | 19958 | 5 | 110695 | 6 | 2 | 5 | 8 | 7 | 13 |
| Nagaland | 0 | 7 | 7 | 17169 | 4 | 110469 | 5 | - | 3 | 20 | - | 16 |
| Orissa | 8 | 103 | 108 | 28756 | 8 | 243260 | 19 | 17 | 4 | 12 | 15 | 18 |
| Punjab | 19 | 134 | 134 | 34481 | 11 | 124401 | 7 | 15 | 13 | 11 | 11 | 5 |
| Rajasthan | 12 | 195 | 202 | 35349 | 13 | 168853 | 13 | 14 | 8 | 9 | 10 | 11 |
| Sikkim | 0 | 8 | 8 | 6389 | 1 | 39375 | 1 | - | 2 | 19 | - | 15 |
| Tamilnadu | 34 | 245 | 435 | 36616 | 14 | 111029 | 4 | 4 | 20 | 4 | 4 | 2 |
| Tripura | 0 | 10 | 10 | 22488 | 6 | 204735 | 16 | 6 | 16 | 3 | 2 | 19 |
| Uttar Pradesh | 26 | 659 | 704 | 28371 | 7 | 157508 | 11 | 12 | 6 | 15 | 12 | 14 |
| West Bengal | 32 | 130 | 291 | 49600 | 19 | 187236 | 14 | 1 | 19 | 17 | 17 | 6 |

† Of the 22 new urban units in Calcutta Urban Agglomeration, 11 are in 24-Pargannas, 4 are in Howrah and 7 are in Hooghly.
Source : *Census of India, 1981*, Paper 1, 1981, Series 23, West Bengal, Calcutta, 1981.

Table 8

Size class distribution of towns and urban population, 1971, 1981

| Size Class | Number of towns | | Population in thousands (per centages in parenthesis) | | | |
|----------------------|-------------------------------------|--------------------------------------|---|-------|------------------|--|
| | 1971 (excluding out- growths) | 1981E (excluding out- growths) | 1971A (excluding out- growths) | 1981B | 1971 | 1981 1971C 1981D |
| I (more than 100000) | 15 | 24 | 16 | 23 | 6022.0 (54.91) | 8009.8 (55.49) 6184.0 (55.70) 7270.2 (53.10) |
| II (50000-99999) | 31 | 39 | 31 | 38 | 2125.4 (19.38) | 2846.4 (19.72) 2167.8 (19.53) 2761.9 (20.18) |
| III (20000-49999) | 49 | 54 | 48 | 54 | 1517.7 (13.84) | 1707.8 (11.83) 1494.8 (13.46) 1929.9 (14.10) |
| IV (10000-19999) | 60 | 92 | 54 | 92 | 824.6 (7.52) | 1325.3 (9.18) 785.2 (7.07) 1052.2 (7.69) |
| V (5000-9999) | 59 | 62 | 54 | 62 | 440.9 (4.02) | 474.8 (3.29) 434.1 (3.91) 610.8 (4.46) |
| VI (less than 5000) | 9 | 20 | 8 | 20 | 36.4 (0.33) | 69.4 (0.49) 35.6 (0.33) 63.9 (0.47) |
| Total | 223 | 291 | 211 | 289 | 10967.0 (100.00) | 14433.5 (100.00) 11101.5 (100.00) 13688.9 (100.00) |

- A. These 211 towns are common to both 1971 and 1981. These exclude two declassified towns, treat units merged in 1981 as merged units in 1971. The classification changes show the effects of merger and declassification.
- B. These treat Bally and Howrah as one unit, and also Gayespur and Khataganj-Gokulpur as one unit, which also induce some changes in classification.
- C. Taking 1971A as base, and adding the figures of outgrowths. For 1981, outgrowth population figures are already included.
- D. Taking 1981B as base, but only for 211 towns which are also covered in 1971, and without changing the classifications as given in 1971.
- E. These include 8 new towns and Bally, population of which was not separately given in 1971.

Notes

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3. Biplab Dasgupta, 'Pre-British Mode of Production in Bengal', in *Social Scientist* August, 1984.
4. *Ibid.*
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7. Ramkrishna Mukherjee, *The Dynamics of a Rural Society—A Study of the Economic Structure in Bengal Villages*, Berlin, 1957.
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9. *Ibid.*
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11. *Ibid.*
12. *Ibid.*
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21. Manas Dasgupta, 'Urbanization in North Bengal', paper presented at the *Conference on Urbanization in West Bengal*, op. cit., 1986.
22. Ashim Chowdhuri, 'Development, Urbanization and Rural-Urban Relationship in a Plantation-dominated Economy : The Case of Jalpaiguri', paper presented at the *Conference on Urbanization in West Bengal*, op. cit., 1986.
23. Nandita Basak, 'Steel Towns and Central Development : The Case of Durgapore', paper presented at the *Conference on Urbanization in West Bengal*, op. cit., 1986.
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27. Biplab Dasgupta, 'Migration and Urbanization', (to be published).
28. Biplab Dasgupta, 'The Evolution of Settlements and Urban classes', op. cit.
29. Ibid.
30. Biplab Dasgupta, 'Migration and Urbanization', op. cit.
31. Biplab Dasgupta, 'The Evolution of Settlements and Urban classes', op. cit.
32. Biplab Dasgupta, 'Migration and Urbanization', op. cit.
33. Ibid.
34. Punnyabrata Sarkar, 'Rural Urban Migration', paper presented at the *Conference on Urbanization in West Bengal*, op. cit., 1984.
35. Sukumar Sen, 'Turnover Migration—The Case of Durgapur', paper presented at the *Conference on Urbanization in West Bengal*, op. cit., 1985.
36. Agricultural productivity has increased (with 1971-72 as 100) from 100.11 in 1976-77 to 135.50 in 1984-85. See Government of West Bengal, *Economic Review, 1985-86*, Calcutta, 1986.
37. Ashim Chowdhury, op. cit.
38. P. K. Dasgupta, 'Small Industrial-Urban Centres and Rural interland', paper presented at the *Conference on Urbanization in*

- West Bengal*, op. cit., 1984.
39. Between 1960-61 and 1984-85, acreage under jute has increased from 291.5 thousand hectares to 534.8 thousand hectares, of oil seeds from 138.8 to 392.8 thousand hectares and of potato from 58.6 to 148.8 thousand hectares. See Government of West Bengal, op. cit.
 40. Biplab Dasgupta, 'Share-cropping in West Bengal during the Colonial Period', *Economic and Political Weekly*, Vol. XIX, No. 13, March, 1984.
 41. Biplab Dasgupta, 'The Evolution of Settlements and Urban classes' op. cit.
 42. See 38. Over the period 1980-81 to 1984-85 production (in thousand tons) increased as follows: in cereals from 8043.2 to 9035.2; oilseeds from 150.4 to 220.0; jute from 4942.7 to 4333.8 and potato from 1971.8 to 3135.3. See Government of West Bengal, op. cit.
 43. P. K. Dasgupta, op. cit.
 44. Basak, op. cit.
 45. Sudeshna Ghosh Ray, op. cit.
 46. Sukumar Sen, op. cit., Nandita Basak, op. cit.
 47. Sau, op. cit.
 48. The increase in the proportions of workers engaged in primary occupation was higher for smaller town-size categories of India 1961-71, during 1961-71 of the according to Census.
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MEASURE OF URBAN CONCENTRATION IN WEST BENGAL

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Introduction

The main objective of this paper is to examine whether there has been an increase in the concentration of urban population in terms of spatial and size-class distribution between 1971 and 1981. More particularly, we are here interested in knowing whether most of the urban growth during this decade has taken place in the districts around Calcutta and in Burdwan, or whether urban growth is showing signs of dispersion over other areas of the state; and also whether there is a tendency for the large urban centres to become larger at the cost of the smaller urban centres.

It is clear that no unique measure of concentration or dispersal exists and to arrive at a conclusion on the basis of one or two such measurements would be wrong. A better alternative would be to examine a number of alternative measures which together would provide some understanding of the processes at work. For this reason we have tried out the following alternative measures in this study :

- (i) spatial distribution of 'new towns';
- (ii) spatial distribution of 'high growth towns';
- (iii) spatial distribution of 'low growth towns';
- (iv) stability of urban growth;
- (v) size-classification of towns and cumulative distribution of towns, and
- (vi) district-wise concentration of urban population.

According to the 1971 Census, there were 223 'urban units' in West Bengal. By 1981 two of these—Haripal of Hooghly and Narayanpur of 24-Parganas—were declassified. Besides, nine of the towns in 24-Parganas—Kasba, Garfa, Bansdroni, Rajpur, Bademasar,

Santoshpur, Kamdahari, Chakdah, Purba Putiari—were merged with Jadavpur, and Khataganj—Gokulpur colony of Nadia was merged with Gayespur. Besides, two of the 1971 towns had been split into two parts to yield two new towns—Bally was separated from Howrah, and Kharagpur railway township was separated from Kharagpur. Besides, 78 new towns were added to the total. All these made the number of towns in 1981, 291, the details being given below :

| | | | |
|-------------|--------------------------|---|-----|
| 1971 | number of towns | — | 223 |
| <i>Less</i> | declassified towns | — | 2 |
| <i>Less</i> | abolition through merger | — | 10 |
| <i>More</i> | splitting old towns | — | 2 |
| <i>More</i> | new towns | — | 78 |
| 1981 | number of towns | — | 291 |

These urban units are divided into six distinct size categories : Class I (1 00 000 plus), Class II (between 50 000 and 99 999), Class III (between 20 000 and 49 999), Class IV (between 10 000 and 19 999) and Class V (between 5 000 and 9 999), while Class VI contains towns with less than 5 000 people which have been classified as 'urban' because they depict several pronounced 'urban characteristics' e.g. in terms of density or non-agricultural activities. Many of the Class VI towns are public sector townships connected with railways, airport, cantonment, power projects, etc.

The population of a town given here includes those for 'outgrowths', which are contiguous areas of high density and having a high proportion of non-agriculturists among workers. The number of outgrowths varies between one and four (in cases of Kanchrapara) 24-Parganas and Bansberia (Hooghly). Many of the towns with outgrowths are quite small, e.g., Panuhat in Burdwan having a population of 4303, with another 422 contributed by an outgrowth.

Another important concept, introduced in 1971 Census, was that of 'urban agglomerations (UA)', which cover a number of urban units 'within a geographically continuous urban continuum.' In 1971 there were 13 such urban agglomerations, but the number increased to 32 in 1981, and covered 193 urban units. However, urban agglomerations widely vary in size and in the number of urban units covered. While Calcutta Urban Agglomeration alone covers 107 urban units, and contains a population of 9,165,650, Mrigala Urban Agglomeration in Hooghly contains two urban units and a population of 17 110. It is seen from Table 5 that 19 of the agglomerations belong to Calcutta, Howrah, Hooghly, 24-Parganas,

Nadia and Burdwan, while the other ten districts account for 13, that is about 40%. In terms of urban units covered by urban agglomerations, the top six districts account for 167 out of 193, that is about 87%.

I New Towns

Here our main interest was in identifying those regions where most of the new towns have been located. For this purpose, West Bengal has been divided into four distinct regions, which take account of the varying levels of urbanization in various parts of the state. Region I, comprises of those districts which are fully (Calcutta) or partly under the operation of the Calcutta Metropolitan Development Authority (C.M.D.A.)—Calcutta, Howrah, Hooghly, Nadia and 24-Parganas. Region II covers the other major urban complex in the state—the district of Burdwan, which includes Durgapur and Asansol, two major industrial cities of the state and a vast mining region, as also a thriving agricultural area of which Burdwan, the district headquarters, is the focal point. Region III covers the western districts of the state—Midnapore, Purulia, Bankura, Birbhum and Murshidabad—a predominantly agricultural area, some parts of which are vulnerable to periodic droughts. Region IV covers the high rainfall, backward, agricultural north Bengal districts—Darjeeling, Jalpaiguri, Cooch Behar, West Dinajpore and Malda. While examining the Census data, our main objective has been to find whether the hitherto backward regions—III and IV are showing signs of urban development or whether the tendency has been to reinforce the existing concentration of towns in regions I and II.

Table 1 provides us with a list of 78 new towns, which were identified by the 1981 Census, and Table 2 provides a region-wise distribution of these. It is seen that regions I and II, which are already highly urbanized, accounted for 62 out of 73 such new towns that is 79.49% of the new towns (Table 2). At the same time these two regions accounted for 78.03% of the population in new towns, again confirming the tendency towards increased urban development in areas which are already relatively highly urbanized (Table 3).

As for the other two regions, the situation is worse than what is indicated by the number of towns alone. In the case of region III, of the six 'new towns' two are Bakreswar in Birbhum and Digha in Midnapore with respective populations of only 186 and 894, the former a place of pilgrimage with a spa, the latter a sea resort (Table 1). Of the others three are due to public sector industrial

activities : Kolaghat power station, Santaldhi power project and Srimantapur, which is a constituent of the Farakka barrage township urban agglomeration. Only in one case the urban development is independent of public sector activity, in Paschim Purnapur, which is close to the Bangladesh border.

The position of region IV, with ten new towns is somewhat better, but here too, some interesting features can be immediately noticed. Dabgram in Jalpaiguri, with a population of 76 210, which entered the big league of class II towns in 1981, but was not classified as a town earlier, (Table 1) raises the question : why this urban area with a large population was not detected earlier, or otherwise, what could explain such a sizeable growth only in ten years' time ? A look at the map reveals that it is very close to the Siliguri, the major city of North Bengal, and may be taken as its extension which has only recently been able to qualify as a town. Located at a distance of only 3 kilometres from Siliguri, this area was recorded as a very large village, with a population of 38-859 in 1971; why this was not defined as a town in that Census, despite the fact that land there was primarily used for non-agricultural purposes, and much more than three-fourth of the workers were engaged in non-agricultural activities, is a mystery.

In the case of region IV one also finds in Jaldhaka a town which is based on a hydro-electricity project, with a population of 3 384, while the other eight gained urban recognition because of their location along the trade-transport routes. Two of them are very close to the existing larger urban centres, and might even be seen as their extensions—Jhali Jhalia near Malda town, and Kasba near Raigunj.

Comparing with the 1971 Census, we find that even in that Census out of 43 newly classified towns as many as 34 were from regions I and II. It seems that over the 1971-1981 period, while the numerical and proportionate weightage of region I declined, that of the region II steeply increased. Burdwan accounted for only 3 new towns in 1971, but as many as 27 in 1981; while in the case of region I the number of new towns only slightly increased from 31 to 35.

Three other points are worth making. First, within region I, the growth of new towns has been concentrated within the CMD area : in 1981 23 out of the 35 new towns in this region were located in Calcutta Urban Agglomeration. Similarly, in the case of region II, all but two of the new towns out of 27 were located in the Asansol-Durgapur industrial-mining belt.

Second, Tables 2 and 3 suggest something more regarding the new urban areas. It is significant that only a small number of towns, less than one-fifths, begin their life at the bottom of the ladder, as Class VI towns with less than 5 000 population. In fact these are mostly highly urbanized but small settlements linked to public sector activities. At the other end, there is no Class I town among the new towns, and only two new towns belong to Classes II and III—Dabgram near Siliguri, which has already been discussed, and Bidhan Nagar (or Salt Lake City), on the fringe of Calcutta. The vast majority of the new towns—60 out of 78—belong to Classes IV and V, that is those having a population between 5 000 and 20 000. Most of these were large rural settlements in 1971, but were not recognized as towns because the 'occupational criterion' of having three-fourth of the workers in non-agricultural activities was not met; but over the next ten years such occupational change came about. (e.g. Sonarpur, 24-Parganas, a predominantly agricultural area). Some, like Mahestala or Noapara with strong industrial base, had already satisfied the occupational criteria, but needed to cross the 5 000 population size limit to obtain recognition as new towns. Many of these are commuter towns, near Calcutta or Asansol-Durgapur.

Third, Table 6, on the female-male ratio of those 78 towns is quite revealing. It shows that only in 27 cases there are more than 900 women per 1000 men, which is the likely figure for a town under strong rural influence. On the other hand, in another 27 the number of women is less than 800, which indicates their industrial character with a significant male migrant population; 19 of which belong in region II (Asansol-Durgapur) alone. However, this table also indicates wide variations among districts. In 24-Parganas, Howrah, Nadia and Murshidabad out of 27 new towns 19 seem to have rural-agricultural base; while on the other hand, in Burdwan, Hooghly, Darjeeling and Jalpaiguri—the industrial, mining and plantation areas—only 6 out of 44 new towns show gender-ratios exceeding 900.

The main points which emerge from this discussion regarding the new towns are as follows :

(a) These are concentrated in highly urbanized areas in districts around Calcutta and the Burdwan district;

(b) Within those regions the concentration has been mainly in the CMD area and the Durgapur-Asansol mining-industrial belt;

(c) Both the Censuses of 1971 and 1981 confirm this tendency

with one difference that between 1971 and 1981 new town development has been significantly speeded up in the Asansol-Durgapur area;

(d) In the western part of West Bengal, there has been hardly any increase in the number of towns; what little increase one notices has been mainly due to townships linked to public sector enterprises or projects.

(e) In comparison with the western part, the northern region has done better; new towns being mostly linked to trading or transport activities. Here too, one finds a tendency for the new towns to be located near the bigger urban centres, e.g. Malda, Siliguri and Raiganj.

(f) Agricultural prosperity, and its spill-over leading to urban growth, has been a major factor behind the growth of new towns in 24-Parganas, Howrah, Nadia and Murshidabad, while in Burdwan, Hooghly, Darjeeling and Jalpaiguri industrial activities played a more important role. In general, in 50 out of 78 new towns agricultural prosperity was a minor factor in urban development.

II High-Growth Towns

In order to identify 'high growth' towns, we set an arbitrary limit of 40% growth in population size during 1971-81. Compared to the average growth rate in West Bengal's urban population of 31.6% over the same period, the 40% limit gives us those towns which show a significant growth rate. Table 7 gives us a complete list of 72 such towns, classified by districts.

Table 8 shows that 48 out of 73 such towns were located in region I, that is in the four districts around Calcutta; and in conjunction with Burdwan (region II), accounted for 56 out of 72 high-growth towns, i.e., 77.78% of such towns. These figures are very similar to those obtained for the new towns. In other words, districts accounting for 33.5% of the total area of West Bengal accounted for more than double the share of the high-growth towns. In contrast, western districts (region III), accounting for 41.82% of West Bengal, accounted for less than 12.50% of such towns; two of them Purulia and Bankura—showing none. The northern region, with 24.3% of the area, accounted for just 9.72% of such towns, and here too in the case of one district—Malda—no town attained a growth rate beyond 40%.

A further exercise was undertaken to identify the towns and Urban Agglomerations with a very high growth rate (the growth rate

of more than 70%). Such towns are 23 in number. Out of these three are in Class I, none in Class II, six in Class III, eleven in Class IV and three in Class V. Of this, 20 are in regions I and II and none in region IV. Nadia occupies a major share of the towns in Classes II and III; Howrah and 24-Parganas are the two districts which dominate the list of very high growth of towns in Classes IV and V.

Observations that can be made from the above trends are the following :

Industrial expansion has accounted for high growth rate in cases of a number of towns in Classes I, II and III. Most of them are situated in the Asansol-Durgapur industrial complex in Burdwan district. These are Durgapur, Raniganj, Andal, Kulti, Disergarh, Jamuria and Burnpur in Burdwan district; Batanagar and Birlapur in 24-Parganas, Haldia and Kharagpur in Midnapore and Farakka Barrage township in Murshidabad. All these towns, except Durgapur and Burnpur, exhibit a growth rate of more than 70%.

A large number of high growth towns in Classes II and III are located within the greater Calcutta area, i.e., in the districts of Howrah, Hooghly, 24-Parganas. Some of these are : North Dum Dum, Barasat and outgrowth, Habra, Bangaon, Madhyamgram, New Barrackpore, Khardah, Nabapally, and Diamond Harbour in 24-Parganas, Bally, Konnagar, Bansberia and outgrowth and Uluberia and outgrowth in Howrah and Hooghly. Most of these towns are connected with Calcutta through rail and road communication and show a fast rate of growth in trade, commerce and other tertiary activities. It seems that congestion and extreme shortage of space within the city of Calcutta have forced the people to settle increasingly in the suburban areas which in turn has led to the high growth of these towns.

It may be noticed that in 24-Parganas, the share of the Class I towns in total high-growth towns, is comparatively small while the share of the Class II and Class III towns is higher. On the other hand, in Burdwan, the share of Class I towns in the total of the high-growth towns, is the highest. It seems that this region still exhibits some scope of expansion while the scope for further concentration in the Class I cities of 24-Parganas, Howrah and Hooghly is limited.

Districts of Howrah and 24-Parganas show a cluster of high growth rate towns of size Classes IV and V, the percentage being the highest in Howrah, which has a traditional base of small and ancillary industries among which machine-tools, engineering and

tailoring are important. Among others, jute industry has occupied an important place. The district thus exhibits a high concentration of skilled and semi-skilled industrial workers. This, along with the district's proximity to Calcutta and good road-communication with the latter has imposed certain urban characteristics in the occupational structure. The proportion of workers engaged in agriculture is significantly low while those in the secondary and tertiary sectors are very high. The percentage of workers in agriculture in this district was 32.52% in 1971 against the state average of 58.43. The district percentage fell further to 24.86 in 1981 while the state average in 1981 was 55.46. The percentage of workers in secondary and tertiary sectors increased from 64.54 in 1971 to 68.65 in 1981 while the corresponding percentage for the State increased from 38.87 in 1971 to 40.42 in 1981. Therefore, it is not surprising that the district exhibits a percentage of urban population which is considerably higher than that in other districts apart from the city of Calcutta.

The growth rate of rural population during the last decade in this district has been considerably lower than the State average indicating a possible trend towards rural-urban migration. All these may well explain the high rate of growth of towns in size Classes IV and V. In view of the absence of any remarkable expansion in agricultural activity it seems to be likely that the volume of activity generated in non-agricultural sector of these towns has positive correlation with the activity of Calcutta-Howrah industrial belt.

Among other districts, as it is known, 24-Parganas, Howrah, Hooghly and Burdwan are districts with a smaller percentage of workers in agriculture. Urban population as percentage of total population is also significantly high in these districts. Yet all these districts exhibit an index of agricultural production which was higher than the state average. Fertile alluvium soil of the Gangetic delta and the application of new high yielding seed varieties could be the possible explanations for such agricultural development.

Nadia and West Dinajpore are two other districts showing a spectacular town growth. An insight into the pattern of economic activity may be helpful for providing an explanation. Here, agriculture being the major source of employment a comparatively higher percentage of workers earn their livelihood from cultivation. That the growth of industry is quite insignificant is clear from the fact that the percentage of workers engaged in industry and services is much below the state average, as also the percentage of registered factories. Yet

these two districts exhibited the highest growth rate of population during the last decade.¹ In view of an insufficient growth of industrial sector another explanation for this spectacular growth could be the expansion in agricultural activity. But there was no dramatic expansion in agricultural activity over this period in these districts. Therefore, this spectacular growth of population may be attributed to large scale migration from East Pakistan, now Bangladesh. A report on socio-economic condition of displaced persons from East Pakistan shows that in 1951, out of the total number of migrants (uptodate) of 21,43,228, about 4,03,804 or 20% settled in Nadia, another 20% in Calcutta, 25% in 24-Parganas and 6% in West Dinajpore. Migration has all along been a major factor in determining the growth of population in these districts. Moreover, as it is known, areas and localities with a high percentage of migrants are likely to attract more migrants over time.

Most of the towns in Nadia exhibit growth rates exceeding 70%. Among them the growth of Kalyani and Gayeshpur might have been influenced by the economic activity of Calcutta Metropolitan area, while Ranaghat, Taherpur, Phulia, and Birnagar are towns dominated by migrants. It seems that the large influx of refugees during and after the Bangladesh war in 1971 has contributed to the present congestion in the towns of Nadia and West Dinajpore.

Cooch Behar, Malda, Murshidabad, Birbhum, Midnapore, Bankura, Purulia are districts with a high percentage of workers in agriculture. All these districts maintained their backward character and accounted for a smaller percentage of high-growth towns during 1971-81. However, the emergence of industrial complexes in Haldia, Nimpura (Kharagpur) and Farakka and growth of some market towns and trading centres in Birbhum have injected some amount of economic activity to these districts.

Coming to the question of consistency, during the decade 1971-1981 59 out of 72 high-growth towns witnessed a growth rate which was higher than the growth rate of the previous decade. The obvious result is an increasing rate of growth of urban population for the state

¹ Taking 1971-72 as base, the indices of agricultural production for 24-Parganas, Howrah, Hooghly, Burdwan, Nadia and West Dinajpur in 1983-84 were 144.20, 142.76, 175.11, 165.47, 163.42 and 118.88 respectively. See Government of West Bengal, *Economic Review*, 1985-86, Calcutta, 1986. Published by Bureau of Applied Economics and Statistics, Government of West Bengal, Calcutta, 1959.

as a whole. Four towns witnessed a similar growth rate over the last two decades. Among them two are situated in 24-Parganas and two are in West Dinajpore. Nine towns witnessed a declining growth rate; these are Durgapur (NA), Kalyani, Katwa, Balurghat and five towns of north 24-Parganas, viz. New Barrackpore, Nabapally, North Dum Dum, Madhyamgram and Habra (M). Durgapur and Kalyani, being new townships, witnessed very high-growth rates in the initial phase, but this was followed by a decline in growth rate in the next phase.

To Summarize

(i) The high-growth towns are mostly located in districts around Calcutta, more specifically, in the CMD area, and the district of Burdwan.

(ii) These high-growth towns generally showed growth rates in 1971-1981 which were higher than those experienced during 1961-71. In other words, the tempo of growth has continued there for two decades.

(iii) The high-growth towns of Burdwan tended to be those with industrial-mining base. While those in the CMD area were influenced more by a variety of factors—demographic, rural, industrial. The high growth of urban population in Nadia, in the same region, was likely to have been influenced by the flow of refugees and other migrants from across the international border.

(iv) In contrast, the other districts tended to show a very small number of high-growth towns. Amongst them, the relatively better figures in West Dinajpore and Murshidabad could also be partly due to population movements across the border.

III Low-Growth Towns

We adopted 15% growth over 1971-81 as the cut-off point below which a town could be defined as a 'low-growth' one. 22 towns listed in Table 9, were found to have a growth rate below 15%. These towns can be broadly classified into three categories.

The first category includes the older project towns or settlements : Kharagpore railway settlement, Adra (railway), Ondal (rail-coal), Hindustan Cable township, Burnpur NM (Steel), Barrackpore cantonment, Ichapore Defence Estate, Dum Dum Aerodrome township. Most of these towns exhibit industrial and migrant characters of the population and a low female-male ratio. Stagnation in such cases may be due to the fact that the scope for expansion has

come to a limit in the particular spheres which form the core of economic activities.

Towns in the second category are mostly located in the backward regions of Bankura, Purulia, Malda and Cooch Behar. These include Sonamukhi, Jhalda, Hili, Jalpaiguri, Kurseong and Kashimbazar. Almost all these towns exhibit higher percentage of females in the population, which is typical of the low-income agricultural regions.

The third category includes Calcutta and some towns in the surrounding area of 24-Parganas, which constitute the main centre of industrial and urban growth in the state. Here the infrastructural facilities and urban labour market have already become saturated.

IV Stability of Urban Growth

Table 10 indicates a remarkable degree of stability in urbanization pattern. It shows that out of 223 urban units in 1971 only two have been declassified, that is less than one percent, which is one of the lowest among the Indian States. The number of 'demoted' urban units is also only two, which shows that the towns generally manage to retain their class position between two censuses. Table 10 shows that in the case of only 8 towns, that is in less than four percent cases, the growth rate was negative, while, as we have already noted, only 22 towns, that is less than one-tenth of towns, showed growth rates which were less than 15%. All these are positive features of the urbanization process in West Bengal.

Table 10 also shows that there have been fewer promotions at the top end, compared to the lower part. About two thirds of the promotions have been from either Class IV to Class III, or from Class V to IV. At the other end, only 8 towns have been promoted to Class I.

Table 11 shows that the developed five districts account for more than two thirds of the promoted towns (66%), while North Bengal accounts for 16%.

Among the western districts, Midnapore shows good performance, and Murshidabad and Purulia reasonable ones, while Purulia and Bankura account for one each of the promoted towns. In other words, even in terms of promoted towns, the more urbanized and developed districts have continued to improve their relative positions.

V Size-classification of towns

Here the objective is to examine whether the proportion of urban population living in larger town has increased over the period 1971-

81. This attempt to obtain some measure of concentration faces two difficulties. First, the practice of the Census of India to lump a number of adjacent towns together to form 'urban agglomerations'. To avoid this, the data have been de-agglomerized into the constituent urban centres.

The second difficulty is partly related to measurement and partly to the concept of concentration. When the urban population for two years, classified by town-size categories, is compared, two types of changes would be noticed—(a) a change in the total urban population in a particular size-class, say Class II, and (b) a change in the number of towns in a particular size-class of town, again, say, Class II. If there is no change in the number of towns in each size-class, no promotion or demotion of towns or no new towns—only (a) would be relevant, and would give a clear idea of the increase or decrease in the concentration of population.

In practice both (a) and (b) are likely to change, and there is likely to be a bias in favour of Class I towns, since no town in this class is subject to further promotion to a higher town-class category. In such a situation, an increase in the population in size-class I would be due to two factors : (i) increase in the population of those towns which in the previous census also belonged to this class, and (ii) additional population due to the addition of towns to this category. If someone is interested in knowing the rate of growth of those Class I towns which were classified similarly in the same class in the previous census, then, obviously, the addition made by the new entrants to Class I should be excluded.

On this question two types of attitudes are revealed among those interested in urban growth. There are those who would feel that only a comparison between the same set of towns in two census years is valid; and a total of size-class urban population with varying number of towns would not permit a meaningful comparison, between figures of two census years. The other view is that, irrespective of the number of towns, or variations in such number, the fact that urban population is concentrated in a certain way between different size-classes is also highly relevant as a major indicator of the urban growth process.

Here our objective is to examine all these alternative measures of urban concentration in terms of size classes. (See Table 8 of Biplab Dasgupta's 'Urbanization and Rural Change'.) This is what follows :

(i) Size-class distribution of urban population in 1971 and 1981 was given in the census while retaining the urban agglomerations as single urban units. In 1971 there were 134 towns and urban agglomerations, but in 1981 the number came down to 130, as a number of towns were put together in new agglomerations—the number of agglomerations having increased from 13 in 1971 to 32 in 1981. Between the two censuses, taking each agglomeration as a single unit, the proportion of urban population in Class I cities increased from around 71% to around 77%, while those for all the other size-classes (excepting Class VI) declined.

(ii) Breaking up the agglomerations into their constituent towns, the number of towns shows a substantial increase, from 223 in 1971 to 291 in 1981. We see that this results in lowering the proportion of urban population belonging to Class I—from 70.98% with agglomerated units to 54.91% in 1971, and from 76.84% to 55.49 in 1981, respectively. This is because the agglomerations include some small urban units, but taken as a whole are treated as Class I entities. But, here again, one observes an increase in the proportion of urban population in Class I towns over time from 54.91% in 1971 to 55.49% in 1981. The proportion declines for other size classes excepting Classes IV and VI.

(iii) Then we take the size-class distribution as given for 1971 as the basis, and take into account the growth in urban population which has taken place during 1971-81 in cases of the towns in each of the 1971 size-classes. We ignore the new towns and the towns which have been declassified, and also ignore the changes in size-class composition which have come about in 1981. Population distributions in 211 towns common to both 1971 and 1981 are considered. Calculating this way, one finds that the Class I towns in 1971 actually registered a relative decline in their importance during 1981—from 55.70% to 53.10%—while all the other size-classes gained at their expense. In other words, this calculation presents an altogether different picture in terms of distributional change from that we obtain from the earlier estimates. The explanation lies in the fact that this calculation is based on 15 Class I towns of 1971, (16 if Jadavpore is included) while the number of Class I towns in 1981 was 23; the eight towns which were promoted to Class I had been earlier classified as Class II.

(iv) Cumulative Distribution of Towns : Yet another way of looking into this question is to work out the cumulative percentage

distribution of urban population. Table 12 shows that in 1971 while 90% of the smaller towns accounted for 40% of urban population, only the largest 10% accounted for the other 60.41%. This concentration was somewhat reduced in 1981, when the share of the largest 10% declined to 60.07%. At the other end the share of the smallest towns declined.

(v) Using those cumulative percentage distributions as base, Gini-coefficients have been calculated to obtain a measure of inequality. The gini-coefficients are as follows :

1971 distribution = 0.676

1981 distribution = 0.680

These figures too suggest a very high degree of concentration of urban population.

What do all these suggest ? First, a point on which there is very little difference, that the level of urban concentration is very high. Second, judging by the size-class distribution of urban population in various years, there is no doubt that the proportion of population belonging to the Class I category, that is cities with more than 1,00,000 people, is continuously increasing. Third, this increase is largely because of the entry of new towns to this category, while the relative numerical importance of the set of towns classified in one census as belonging to Class I declines in the next census. Fourth, if one is interested in the cumulative frequency distribution of towns, it appears that while the proportion of urban population in the top 10% of town is very high, it is subject to decline over time.

VI Districts

Having examined the trends relating to towns, let us examine district as the unit of analysis. Tables 13 and 14 provide us with the necessary data.

Table 13 shows a very high degree of concentration of urban population around Calcutta. Of the 16 districts in the state, five including Calcutta, 24-Parganas, Howrah, Hooghly and Nadia accounted for almost four-fifth (75.58%) of the urban population in 1951, and 72.60% in 1981. Taking Burdwan with this group, the proportion varies between 83.88% and 82.47% (1981), while the other districts account for less than one-fifth of the total urban population.

However, within this group of highly urbanized districts several interesting variations can be noticed. While, the relative importance of Calcutta is steeply declining over time, the other four districts in the periphery (excepting Howrah during 1961-71) showed consistent growth in their relative share of urban populations during

1951-81. Burdwan too seems to be improving its relative share at every census. Taking the decline in Calcutta (and, to some extent, Howrah) and the growth in the other five districts including Burdwan, together their relative position has remained more or less unchanged over these years.

Among the other ten districts, in cases of seven the rate of urbanization was less than ten percent even in 1981, and in case of another (West Dinajpore), that barrier had just been crossed. This leaves out only two districts, away from Calcutta and Burdwan, where the rate of urbanization somewhat exceeds ten percent—Darjeeling and Jalpaiguri in North Bengal, both drawing economic support from the tea plantations.

During 1971-81 the relative position of the districts has remained virtually unchanged. Ranks of districts in terms of urbanization remained unchanged between 1971 and 1981 in ten cases, changed by only one place in cases of four other districts, while by two places only once. It is also significant that the growth rate is highest in Burdwan, followed by Darjeeling, Jalpaiguri and the four districts around Calcutta, while those with low rates of urbanization also reveal low rates of growth of urban population; the rank correlation coefficient between the two being 0.87. This shows that urbanized districts are becoming more rapidly urbanized than the non-urbanized ones.

VII Conclusion

What do all these exercises indicate ?

In terms of size-class distribution these show that the proportion of urban population living in Class I urban units is excessively high and increasing. Though the proportionate increase is largely because of the promotion of other towns to Class I, even when promotions are ignored, the Class I towns in 1971, continue to account for 53.11% of urban population in 1981 including a decline of 2.59% in its share over the decade. However, when the size-classes are converted into deciles in a cumulative distribution, the proportion of urban population accounted for by the top 10% of urban units shows a decline of 2.45%. In any case, such declines are not large enough to alter the over-all picture.

When the distribution of urban population among districts is considered, the five highly urbanized districts—Calcutta, Howrah, Hooghly, 24-Parganas and Burdwan—continue to dominate the scene; but the proportion of urban population accounted for by

those declined from 80.06% in 1971 to 78.05 in 1981, a decadal decline of 2.01%. This, however, fails to bring about any significant change in the ranking of districts. On the other hand, the more urbanized districts also occupy the lion's share of new towns, high growth towns and promoted towns.

It is clear that the main impulse for urban growth in West Bengal continues to be derived from industrial and manufacturing activities—particularly in cases of the new towns. However, a good number of new towns—particularly in Howrah and 24-Parganas—appear to be transformed agricultural settlements, which also account for a high proportion of promoted and high-growth towns. Generally speaking, the more urbanized districts are usually also the ones with better agricultural performance; but within each of these districts the agricultural and industrial areas tend to be clearly demarcated. This is particularly true of Burdwan (where industrial mining activities are concentrated in Durgapore-Asansol areas), 24-Parganas (where the northern part is industrially developed while the southern part is predominantly agricultural) and Hooghly (where industrial areas are located along the river Ganga).

The western part of the state particularly Bankura and Purulia continues to show low rates of urban growth, which are considerably below the state average and indicate large scale net-outmigration. Birbhum, comparable to those two districts in other respects, however, shows a high rate of urban growth. These figures suggest the need for promoting urbanization in this area.

The backward North Bengal districts, in contrast, show very high rates of urbanization, far exceeding the state average (excepting Cooch Behar). At the other end, the rates of urban growth for Calcutta, Howrah and Hooghly appear to be modest, while that for Calcutta is disastrously low. This is a welcome development, though, as we have already noted, this area continues to account for a high proportion of new towns, high-growth towns and promoted towns.

The area showing a spectacular urban growth is Burdwan—mainly the Asansol and Durgapore region—which accounts for a very high share of new town and high-growth towns.

Table 1

List of New Towns and their characters, in 1981
Census, West Bengal

| Districts | Name of the Town | Population | Gender Ratio | Participation Rate |
|-------------|------------------|------------|--------------|--------------------|
| 1 | 2 | 3 | 4 | 5 |
| 24-Parganas | Bidhan Nagar | 31,266 | 902 | 34.43 |
| | Laskarpur | 14,525 | 940 | 24.29 |
| | Gopalpur | 14,322 | 934 | 27.55 |
| | Raghunathpur | 12,505 | 894 | 23.51 |
| | Chata Kalikapur | 11,080 | 937 | 22.05 |
| | Sonarpur | 16,752 | 910 | 22.62 |
| | Chakkasipur | 14,024 | 859 | 23.11 |
| | Bowali | 12,578 | 926 | 18.92 |
| | Chandannagar | 8,834 | 884 | 25.51 |
| | Sripur Bagharol | 8,699 | 949 | 25.09 |
| | Gobindapur | 7,659 | 881 | 24.16 |
| | Bandipur | 7,309 | 946 | 24.57 |
| | Noapara | 6,208 | 910 | 26.49 |
| | Maheshtala | 5,028 | 899 | 24.08 |
| Howrah | Panchpara | 9,713 | 884 | 26.00 |
| | Raghudebbati | 7,400 | 933 | 20.52 |
| | Ramchandrapur | 6,273 | 935 | 24.08 |
| | Khalor | 6,783 | 822 | 19.51 |
| | Bipra Noapara | 6,172 | 952 | 24.72 |
| | Santoshpur | 4,602 | 900 | 21.09 |
| | Makardaha | 4,725 | 919 | 23.49 |
| Hooghly | Koota | 9,997 | 782 | 27.59 |
| | Raghunathpur | 8,164 | 785 | 26.16 |
| | Naldanga | 7,760 | 822 | 26.41 |
| | Khalisani | 7,526 | 939 | 26.36 |
| | Madhusudanpur | 5,430 | 806 | 27.25 |
| | Mirgala | 9,108 | 867 | 22.06 |
| | Mohanpur | 8,002 | 898 | 29.68 |
| | Begampur | 7,009 | 918 | 26.99 |
| | Kotrang | 4,868 | 533 | 39.19 |

Table 1 (Continued)

| District | Name of the Town | Population | Gender Ratio | Participation Rate |
|----------|---------------------------------------|------------|--------------|--------------------|
| 1 | 2 | 3 | 4 | 5 |
| Hooghly | Bandel thermal power station township | 678 | 808 | 34.66 |
| Nadia | Gadigachha | 10,827 | 957 | 28.76 |
| | Aistala | 18,992 | 986 | 19.00 |
| | Madanpur | 7,895 | 943 | 23.41 |
| | Haringhata dairy farm town | 6,486 | 666 | 36.70 |
| Burdwan | Sripur | 12,375 | 743 | 25.57 |
| | Bhanowar | 11,545 | 749 | 28.39 |
| | Siarsol | 16,357 | 492 | 33.07 |
| | Bagra | 13,898 | 685 | 30.57 |
| | Amkula | 13,576 | 662 | 33.95 |
| | Kajora | 14,000 | 669 | 31.22 |
| | Kenda | 11,602 | 690 | 31.43 |
| | Paraskol | 11,186 | 677 | 31.10 |
| | Bahula | 11,020 | 720 | 30.45 |
| | Chhora | 10,491 | 769 | 29.73 |
| | Chinakuri | 19,291 | 913 | 26.99 |
| | Shitalpur | 13,035 | 802 | 30.19 |
| | Ninga | 9,624 | 657 | 30.27 |
| | Pariharpur | 7,103 | 788 | 18.87 |
| | Ballavpur | 6,614 | 771 | 27.33 |
| | Raghunathchak | 5,060 | 724 | 26.99 |
| | Dingla | 6,948 | 812 | 29.18 |
| | Chak Nankola | 6,397 | 537 | 33.48 |
| | Petana | 7,939 | 845 | 23.60 |
| | Panuhat | 7,491 | 929 | 30.40 |
| | Kaksa | 9,402 | 902 | 31.71 |
| | Sukdal | 6,838 | 822 | 31.71 |
| | Parasia | 4,830 | 571 | 40.72 |
| | Nimsha | 2,321 | 771 | 15.59 |
| | Khandra | 4,634 | 837 | 28.81 |
| | Lalbazar | 4,714 | 784 | 26.60 |
| | Ramnagar | 3,571 | 769 | 34.60 |

Table 1 (Continued)

| District | Name of the Town | Population | Gender Ratio | Participation Rate |
|-----------------|-------------------------------------|------------|--------------|--------------------|
| 1 | 2 | 3 | 4 | 5 |
| Birbhum | Bakreswar tourist centre | 186 | 878 | 32.25 |
| Purulia | Santalalhi power project town | 5,305 | 766 | 30.98 |
| Murshidabad | Paschim Purnapur | 17,573 | 997 | 39.61 |
| | Srimantapur | 2,364 | 981 | 21.95 |
| Midnapore | Kolaghat power station project town | 1,303 | 501 | 43.13 |
| | Digha tourist centre town | 894 | 862 | 33.44 |
| Darjeeling | Cart Road | 11,042 | 902 | 21.69 |
| | Uttar Bagdogra | 8,709 | 888 | 29.45 |
| | Jaldhaka power project town | 3,384 | 765 | 34.95 |
| Jalpaiguri | Dabgram | 76,210 | 863 | 27.49 |
| | Uttar Latabari | 8,661 | 777 | 24.41 |
| | Odlabari | 6,889 | 808 | 27.62 |
| | Gairkata | 5,903 | 833 | 30.10 |
| West Dinaj-pore | Kasba | 5,545 | 921 | 26.29 |
| Malda | Jhali Jhalia | 5,650 | 890 | 25.53 |
| | Jagannathpur | 3,952 | 940 | 26.34 |

Source : Census of India, 1981 West Bengal, *Provisional Population Totals*, Paper 1 of 1981 (Supplement). Calcutta, 1983.

Table 2
Region-wise Distribution of New Towns in
1981 Census in West Bengal

| Town Class | I | II | III | IV | V | VI | Total |
|------------|---|------------|------------|---------------|---------------|--------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Region | | | | | | | |
| I | - | - | 1 (100) | 9 (40.18) | 21 (55.26) | 4 (31.63) | 35 (44.87) |
| II | - | - | - | 12 (50.66) | 10 (26.32) | 5 (42.68) | 27 (34.62) |
| III | - | - | - | 1 (5.62) | 1 (2.63) | 4 (10.10) | 6 (7.69) |
| IV | - | 1 (100) | - | 1 (3.54) | 6 (15.79) | 2 (15.59) | 10 (12.82) |
| Total | - | 1 (100) | 1 (100) | 23 (100) | 38 (100) | 15 (100) | 78 (100) |

Source : Census of India 1981, West Bengal, *Provisional Population Totals*, Paper 1 of 1981 (Supplement) Calcutta, 1983.

Table 3
Distribution of New Towns population in
West Bengal, 1981 Census

| Town Class | I | II | III | IV | V | VI | Total |
|------------|---|--------|--------|----------|----------|--------|----------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Region | | | | | | | |
| I | - | - | 31,266 | 1,25,605 | 1,57,455 | 14,873 | 3,29,199 |
| II | - | - | - | 1,58,376 | 73,416 | 20,070 | 2,51,862 |
| III | - | - | - | 17,573 | 5,305 | 4,747 | 27,625 |
| IV | - | 76,210 | - | 11,042 | 41,357 | 7,336 | 1,35,945 |
| Total | | 76,210 | 31,266 | 3,12,596 | 2,77,533 | 47,026 | 7,44,631 |

Source : Ibid.

Table 4
Distribution of new towns and new town population in
West Bengal, 1971 Census

| Town Class | I | II | III | IV | V | VI | Total |
|-----------------|-----|-----|---------------|---------------|------------------|---------------|------------------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Region/District | | | | | | | |
| Region I | - | - | 21,852 (1) | 83,068 (7) | 1,32,320 (19) | 15,973 (4) | 2,53,213 (21) |
| 24-Parganas | - | - | 21,852 (1) | 60,837 (5) | 82,867 (12) | 11,922 (3) | 1,77,478 (21) |
| Howrah | - | - | - | 10,781 (1) | 33,093 (5) | 4,501 (1) | 48,375 (7) |
| Hooghly | - | - | - | 11,450 (1) | 8,445 (1) | - | 19,895 (2) |
| Nadia | - | - | - | - | 7,915 (1) | - | 7,915 (1) |
| Region-II | - | - | - | - | 18,824 (3) | - | 18,824 (3) |
| Burdwan | - | - | - | - | 18,824 (3) | - | 18,824 (3) |
| Region-III | - | - | - | 26,013 (2) | 30,122 (4) | - | 56,135 (6) |
| Midnapore | - | - | - | 13,371 (1) | 9,968 (1) | - | 23,339 (2) |
| Purulia | - | - | - | 12,642 (1) | 5,754 (1) | - | 18,396 (2) |
| Bankura | - | - | - | - | - | - | - |
| Birbhum | - | - | - | - | - | - | - |
| Murshidabad | - | - | - | - | 14,400 (2) | - | 14,400 (2) |
| Region-IV | - | - | - | 17,787 (1) | 14,602 (2) | - | 32,389 (3) |
| Darjeeling | - | - | - | - | - | - | - |
| Jalpaiguri | - | - | - | 17,787 (1) | - | - | 17,787 (1) |
| Cooch Behar | - | - | - | 8,980 | 8,980 (1) | - | 8,980 (1) |

Table 4 (Continued)

| | | | | | | | |
|----------------|---|---|---------------|------------------|------------------|---------------|------------------|
| West Dinajpore | - | - | - | - | 5,622 (1) | - | 5,622 (1) |
| Malda | - | - | - | - | - | - | - |
| West Bengal | - | - | 21,852 (1) | 1,26,868 (10) | 1,95,868 (28) | 15,973 (4) | 3,60,561 (43) |

Source : Ibid.

Table 5

Distribution of new towns and new town population in West Bengal, 1981 Census

| Town Class | I | II | III | IV | V | VI | Total |
|-------------|-----|-----|---------------|------------------|------------------|---------------|------------------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Region-I | - | - | 31,266 (1) | 1,25,605 (9) | 1,57,455 (21) | 14,873 (4) | 3,29,199 (35) |
| 24-Parganas | - | - | 31,266 (1) | 95,786 (7) | 43,737 (6) | - | 1,70,789 (14) |
| Howrah | - | - | - | - | 36,341 (5) | 9,327 (2) | 45,668 (7) |
| Hooghly | - | - | - | - | 62,996 (8) | 5,546 (2) | 68,542 (10) |
| Nadia | - | - | - | 29,819 (2) | 14,381 (2) | - | 44,200 (4) |
| Region-II | - | - | - | 1,58,376 (12) | 73,416 (10) | 20,070 (5) | 2,51,862 (27) |
| Burdwan | - | - | - | 1,58,376 (12) | 73,416 (10) | 20,070 (5) | 2,51,862 (27) |
| Region-III | - | - | - | 17,573 (1) | 5,305 (1) | 4,747 (4) | 27,625 (6) |
| Midnapore | - | - | - | - | - | 2,197 (2) | 2,197 (2) |
| Purulia | - | - | - | - | 5,305 (1) | - | 5,305 (1) |
| Bankura | - | - | - | - | - | - | - |
| Birbhum | - | - | - | - | - | 186 (1) | 186 (1) |

Table 5 (Continued)

| Town Class | I | II | III | IV | V | VI | Total |
|--------------|---------------|---------------|-----------------|------------------|------------------|----------------|------------------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Murshidabad | - | - | - | 17,573 (1) | - | 2,364 (1) | 19,937 (2) |
| Region-IV | 76,210 (1) | | | 11,042 (1) | 41,357 (6) | 7,336 (2) | 1,35,945 (10) |
| Darjeeling | - | - | - | 11,042 (1) | 8,709 (1) | 3,384 (1) | 23,135 (3) |
| Jalpaiguri | 76,210 (1) | | - | - | 21,453 (3) | - | 97,663 (4) |
| Cooch Behar | - | - | - | - | - | - | - |
| W. Dinajpore | - | - | - | - | 5,545 (1) | - | 5,545 (1) |
| Malda | - | - | - | - | 5,650 (1) | 3,952 (1) | 9,602 (2) |
| West Bengal | 76,210 (1) | 31,266 (1) | 3,12,596 (1) | 2,77,533 (23) | 2,77,533 (38) | 47,026 (15) | 7,44,631 (78) |

Table 6
Distribution of New Towns of 1981 Census over
Gender-Ratio Ranges for Regions

| Gender Ratio Range | Below 500 | 500-699 | 700-799 | 800-899 | 900-Above |
|--------------------|-----------|---------|---------|---------|-----------|
| Region | | | | | |
| I | - | 2 | 2 | 11 | 20 |
| II | 1 | 8 | 10 | 5 | 3 |
| III | - | 1 | 1 | 2 | 2 |
| IV | - | - | 2 | 5 | 3 |
| Total | 1 | 11 | 15 | 23 | 28 |

Note 1 : Gender Ratio—Number of females per thousand males.

Source : Census of India 1981, Series-23, West Bengal, Provisional Population Totals, Paper 1 of 1981 (Supplement).

Table 7
HIGH GROWTH TOWNS 1981

| Towns | District | Population Growth 1971-81 (%) | Size Class | Gender Ratio |
|--|-------------|-------------------------------------|---------------|-----------------|
| Within Calcutta Urban Agglomeration : | | | | |
| South Suburban | 24-Parganas | 44.75 | I | 889 |
| Jadavpur | 24-Parganas | 78.01 | I | 886 |
| Kamarhati | 24-Parganas | 41.92 | I | 769 |
| North Dum Dum | 24-Parganas | 50.33 | II | 940 |
| Bansberia | Hooghly | 43.07 | II | 808 |
| Barasat | 24-Parganas | 62.54 | II | 927 |
| Bally | Howrah | 41.48 | II | 702 |
| Konnagar | Hooghly | 48.75 | II | 844 |
| Madhyamgram | 24-Parganas | 51.45 | III | 936 |
| New Barrackpore | 24-Parganas | 43.13 | III | 932 |
| Khardah | 24-Parganas | 40.18 | III | 861 |
| Gayespur | Nadia | 93.69 | III | 971 |
| Kalyani | Nadia | 109.07 | III | 860 |
| Nabapally | 24-Parganas | 48.35 | III | 954 |
| Uluberia | Howrah | 43.52 | III | 908 |
| Fort Gloster | Howrah | 47.06 | III | 671 |
| Krishnapur | 24-Parganas | 69.58 | III | 943 |
| Batanagar | 24-Parganas | 123.48 | III | 575 |
| Jorhat | Howrah | 203.06 | IV | 839 |
| Sankrail | Howrah | 70.59 | IV | 798 |
| Bankra | Howrah | 74.46 | IV | 884 |
| Jyangra | 24-Parganas | 77.84 | IV | 917 |
| Makhla | Hooghly | 53.48 | IV | 771 |
| Nabagram Colony | Hooghly | 53.29 | IV | 879 |
| Sarenga | Howrah | 48.84 | IV | 892 |
| Gurdaha | 24-Parganas | 145.23 | IV | 946 |
| Kalara | Howrah | 40.79 | IV | 926 |
| Manikpur | Howrah | 60.77 | IV | 730 |
| Krishnagar | 24-Parganas | 89.68 | IV | 892 |
| Arjunpur | 24-Parganas | 42.36 | IV | 911 |
| Jagadishpur | Howrah | 99.53 | IV | 889 |
| Garui | 24-Parganas | 57.52 | IV | 960 |
| Dhuilya | Howrah | 50.37 | IV | 950 |
| Bisarpara | 24-Parganas | 82.55 | V | 871 |
| Panpur | 24-Parganas | 85.97 | V | 941 |

Table 7 (Continued)

| | | | | |
|---|---------------|--------|-----|-----|
| Madrail | Howrah | 48.17 | V | 942 |
| Bandra | 24-Parganas | 62.99 | V | 944 |
| Podara | Howrah | 85.04 | V | 871 |
| Outside Calcutta Urban Agglomeration : | | | | |
| Outer Burnpur | Burdwan | 51.72 | II | 796 |
| Jamuna | Burdwan | 93.79 | IV | 850 |
| Durgapur | Burdwan | 148.01 | I | 822 |
| Kharagpur | Midnapore | 147.58 | I | 876 |
| Siliguri | Darjeeling | 57.80 | I | 793 |
| Habra | 24-Parganas | 41.15 | II | 931 |
| Jemari | Burdwan | 49.28 | V | 698 |
| Balurghat | West Dinajpur | 67.74 | I | 898 |
| Guriahati | Cooch Behar | 42.24 | IV | 940 |
| Kulti | Burdwan | 56.13 | III | 961 |
| Bangaon | 24-Parganas | 40.31 | II | 929 |
| Phulia | Nadia | 469.74 | III | 918 |
| Taherpur | Nadia | 98.17 | III | 979 |
| Birlapur | 24-Parganas | 50.85 | III | 661 |
| Jangipur | Murshidabad | 46.51 | III | 988 |
| Rampurhat | Birbhum | 47.92 | III | 887 |
| Islampur | West Dinajpur | 67.69 | III | 871 |
| Dakshin-Jhapardaha | Howrah | 54.35 | IV | 960 |
| Sainthia | Birbhum | 51.21 | III | 914 |
| Gangarampur | West Dinajpur | 53.74 | III | 921 |
| Amlagora | Midnapore | 46.40 | IV | 927 |
| Haldia | Midnapore | 111.74 | III | 781 |
| Diamond Harbour | 24-Parganas | 53.73 | III | 923 |
| Niamatpur | Burdwan | 47.07 | IV | 767 |
| Panchla | Howrah | 141.03 | IV | 928 |
| Farrakka | Murshidabad | 80.88 | IV | 869 |
| Memari | Burdwan | 50.54 | IV | 866 |
| Beldanga | Murshidabad | 60.86 | IV | 973 |
| Nalhati | Birbhum | 57.73 | IV | 964 |
| Kanyanagar | 24-Parganas | 114.62 | IV | 901 |
| Falakata | Jalpaiguri | 66.83 | IV | 942 |
| Bagula | Nadia | 59.24 | IV | 959 |
| Sarakdi-Nadiha | Burdwan | 66.52 | V | 762 |
| (Sen Raleigh Township) | | | | |
| Haldibari | Cooch Behar | 40.47 | V | 906 |

Source : Census of India 1981, Series 23 (West Bengal) *Provisional Population Totals, Paper 1 of 1981 (Supplement)*, Calcutta, 1983.

Table 8
Classwise and Districtwise Distribution of High Growth
Towns in West Bengal, 1971-1981 (class defined by 1981
population)

| District | x | size class | | | | | Total number | Percentage of total | Percentage of area covered by the district |
|----------------|---|------------|----|-----|----|---|-----------------|------------------------|--|
| | | I | II | III | IV | V | | | |
| 24-Parganas | 3 | 4 | 8 | 6 | 3 | | 24 | 33.3 | 16.51 |
| Howrah | - | 1 | 2 | 10 | 2 | | 15 | 20.8 | 1.64 |
| Hooghly | - | 2 | - | 2 | - | | 4 | 5.6 | 3.55 |
| Burdwan | 1 | 1 | 1 | 3 | 2 | | 8 | 11.1 | 7.92 |
| Nadia | - | - | 4 | 1 | - | | 5 | 6.9 | 4.42 |
| Murshidabad | - | - | 1 | 2 | - | | 3 | 4.2 | 6.07 |
| Birbhum | - | - | 2 | 1 | - | | 3 | 4.2 | 5.10 |
| Midnapore | 1 | - | 1 | 1 | - | | 3 | 4.2 | 15.38 |
| Bankura | - | - | - | - | - | | - | - | 7.75 |
| Purulia | - | - | - | - | - | | - | - | 7.04 |
| Maldah | - | - | - | - | - | | - | - | 4.08 |
| West Dinajpore | 1 | - | 2 | - | - | | 3 | 4.2 | 6.04 |
| Darjeeling | 1 | - | - | - | - | | 1 | 1.4 | 3.68 |
| Jalpaiguri | - | - | - | 1 | - | | 1 | 1.4 | 6.96 |
| Cooch Behar | - | - | - | 1 | 1 | | 2 | 2.8 | 3.86 |
| West Bengal | 7 | 8 | 21 | 28 | 8 | | 72 | 100.0 | 100.00 |

Source : Census of India 1981, Series 23 (West Bengal) *Provisional Population Totals, Paper 1 of 1981 (Supplement)*, Calcutta, 1983.

Table 9
Low-growth Towns, 1981

| Town | District | Population growth 1971-81 | Size Class | Gener ratio |
|---------------------------|-------------|---------------------------------|---------------|----------------|
| Calcutta City | Calcutta | 4.54 | I | 712 |
| North Barrackpore | 24 Parganas | 6.49 | II | 886 |
| Nangi | 24 Parganas | 13.25 | II | 873 |
| Panchur | 24 Parganas | -13.39 | II | 843 |
| Barrackpore cantonment | 24 Parganas | -20.66 | IV | 567 |
| Ichapur defence estate | 24 Parganas | -12.75 | IV | 737 |
| Patulia | 24 Parganas | 13.25 | V | 893 |
| Kerulia | 24 Parganas | 13.11 | VI | 952 |
| Dum Dum aerodrome | 24 Parganas | -25.39 | VI | 805 |
| Burnpur | Burdwan | 13.03 | III | 730 |
| Kharagpur railway station | Midnapore | 11.62 | II | 896 |
| Ondal | Burdwan | -31.76 | IV | 816 |

Table 9 (Continued)

| | | | | |
|-----------------------|----------------|--------|-----|-----|
| Kasimbazar | Murshidabad | -16.83 | V | 921 |
| Krishnanagar | Nadia | 14.13 | II | 962 |
| Jalpaiguri | Jalpaiguri | 11.74 | II | 917 |
| Hindustan Cables town | Burdwan | -8.81 | V | 906 |
| Adra | Purulia | 14.67 | III | 831 |
| Sonamukhi | Bankura | 4.88 | IV | 972 |
| Kurseong | Darjeeling | 9.37 | IV | 915 |
| Jaynagar-Majilpur | 24-Parganas | 7.33 | IV | 903 |
| Jhalda | Purulia | 12.29 | IV | 916 |
| Hili | West Dinajpore | -0.57 | V | 928 |

Source : Census of India, West Bengal, series 23, *Provisional Population Totals Paper I of 1981 (Supplement)*, Calcutta, 1983

Table 10

**List of promoted, demoted, merged and
declassified towns, 1981**

Promoted

- (i) from Class II to Class I—seven
Barrackpore, Naihati, Titagar (24-Parganas), Chandan-
nagare (Hooghly), Nabadwip (Nadia), Balurghat (West
Dinajpore) and Siliguri (Darjeeling);
- (ii) from Class IV to Class I—one
Jadavpore (24-Parganas); (This is largely because of the
merger of nine urban units to Jadavpore.)
- (iii) from Class III to Class II—thirteen
Barasat, Basirhat, Garulia, Nangi, Ashokenagar, Kalyan-
garh (24-Parganas), Bally (Howrah), Konnagar (Hooghly),
Ranaghat, Chakdah (Nadia), Chittaranjan, Raniganj
(Burdwan), Raiganj (West Dinajpore), Darjeeling (Dar-
jeeling);
- (iv) from Class IV to Class III—eighteen
Canning, Diamond Harbour, Birlapore, Krishnapore
(24-Parganas), Kalyani, Gayeshpur, Taherpur (Nadia),
Fort Gloster, Chengail (Howrah), Murshidabad (Murshi-
dabad), Dubrajpur, Sainthia (Birbhum), Jhargram (Midna-
pore), Adra (Purulia), Islampur, Gangarampur (West
Dinajpore), Dhubguri, Alipurduar railway junction (Jal-
paiguri);

Table 10 (Continued)

- (v) from Class V to Class III -two
Batanagar (24-Parganas), Haldia (Midnapore);
- (vi) from Class VI to Class III-one
Phulia (Nadia);
- (vii) from Class V to Class IV-thirty
Jorhat, Manikpur, Nibra, Banupur, Jagdishpur, Chaka-
para, Dhuiya, Dakshin-Jhaparda, Panchla, Amta
(Howrah), Gurdaha, Krishnanagar, Arjunpur, Garui,
Nebadhabhi-Duttapukur, Kanyanagar (24-Parganas),
Jagadanandapur, Bagula (Nadia), Jamuria (Burdwan),
Chandrakona, Mahisadal, Amlagora (Midnapore), Khatra
(Bankura), Nalhati (Birbhum), Farakka township,
Beldanga (Murshidabad), Domahani, Falakata (Jalpai-
guri), Mathabhanga, Guriahati (Cooch Behar);
- (viii) from Class IV to Class V-two
Bandra (24-Parganas), Podara (Howrah).

Demoted

from Class III to Class IV-two
Barrackpore Cantonment (24-Parganas), Ondal
(Burdwan).

Declassified

Haripal (Hooghly), Narayanpur (24-Parganas).

Merged

Merged with Jadavpur (Class I), 24-Parganas
Kasba, Garfa (Class III), Bansdroni, Rajpur, Bademasar,
Santoshpur (Class IV), Kamdahari Chakdah and Purba
Putiari (Class V).
Merged with Gayespur, Nadia-Khataganj-Gokulpur
(Class V).

Table 11
District-wise distribution of promoted towns, 1981

| District | No. of promoted towns | % of promoted towns |
|----------------|-----------------------|---------------------|
| Cooch Behar | 2 | 2.70 |
| Jalpaiguri | 4 | 5.40 |
| Darjeeling | 2 | 2.70 |
| West Dinajpore | 4 | 5.40 |

Table 11 (Continued)

| | | |
|-------------|----|--------|
| Malda | 0 | 0 |
| Murshidabad | 3 | 4.06 |
| Nadia | 9 | 12.16 |
| 24 Parganas | 21 | 28.38 |
| Howrah | 14 | 18.92 |
| Hooghly | 2 | 2.70 |
| Midnapore | 5 | 6.76 |
| Bankura | 1 | 1.35 |
| Purulia | 1 | 1.35 |
| Burdwan | 3 | 4.06 |
| Birbhum | 3 | 4.06 |
| West Bengal | 74 | 100.00 |

Table 12
Cumulative distribution of urban population in
West Bengal 1971-1981

| Cumulative percentage of towns | 1971 | | 1981 | |
|--------------------------------------|--------------------|--|--------------------|--|
| | Number of towns | Cumulative percentage of population | Number of towns | Cumulative percentage of population |
| (1) | (2) | (3) | (4) | (5) |
| top 5 percent | 10 | 49.12 | 14 | 48.59 |
| top 10 percent | 21 | 60.41 | 29 | 60.07 |
| top 20 percent | 42 | 73.19 | 58 | 74.15 |
| top 30 percent | 63 | 81.64 | 87 | 82.21 |
| top 40 percent | 84 | 87.05 | 116 | 87.19 |
| top 50 percent | 105 | 90.86 | 145 | 90.76 |
| top 60 percent | 126 | 93.60 | 174 | 93.63 |
| top 70 percent | 147 | 95.74 | 203 | 95.95 |
| top 80 percent | 168 | 97.51 | 232 | 97.81 |
| top 90 percent | 189 | 98.88 | 261 | 99.22 |
| top 100 percent | 213 | 100.00 | 289 | 100.00 |

Note : The number of towns in 1971 is computed taking into consideration, the merger of 1971 towns in 1981, but including the 2 towns declassified in 1981. The number of towns in 1981, is computed considering towns which are created splitting a single 1971 town, as one.

Table 13

Index of Concentration of Urban population in the District of West Bengal for 1961, 1971 and 1981 Census

| Sl. No. | District | 1951 district percentage to total urban population in the State | 1961 district percentage to total urban population in the State | Index of concentration 1951-1961 | 1971 district percentage to total urban population in the State | Index of concentration 1961-1971 | 1981 district percentage to total urban population in the State | Index of concentration 1971-1981 |
|---------|----------------|---|---|----------------------------------|---|----------------------------------|---|----------------------------------|
| (1) | (2) | (3) | (4) | (5) | (5) | (7) | (8) | (9) |
| 01. | Bankura | 1.50 | 1.43 | -0.07 | 1.38 | -0.05 | 1.25 | -0.13 |
| 02. | Birbhum | 1.08 | 1.18 | 0.10 | 1.14 | -0.04 | 1.21 | 0.07 |
| 03. | Burdwan | 5.10 | 6.55 | 1.45 | 8.30 | 1.75 | 9.87 | 1.57 |
| 04. | Calcutta | 42.82 | 34.18 | -3.64 | 28.74 | -5.44 | 22.80 | -5.94 |
| 05. | Cooch Behar | 0.80 | 0.83 | 0.03 | 0.88 | 0.05 | 0.85 | -0.03 |
| 06. | Darjeeling | 1.50 | 1.69 | 0.19 | 1.64 | -0.05 | 1.94 | 0.30 |
| 07. | Hooghly | 6.25 | 6.56 | 0.31 | 6.97 | 0.41 | 7.26 | 0.29 |
| 08. | Howrah | 8.30 | 9.74 | 1.44 | 9.25 | -0.49 | 9.26 | 0.01 |
| 09. | Jalpaiguri | 1.43 | 1.33 | -0.10 | 1.63 | 0.30 | 2.25 | 0.62 |
| 10. | Malda | 0.54 | 0.58 | 0.04 | 0.62 | 0.04 | 0.67 | 0.05 |
| 11. | Midnapore | 4.00 | 3.90 | -0.10 | 3.86 | -0.04 | 3.97 | 0.11 |
| 12. | Muirsudabad | 2.14 | 2.26 | 0.12 | 2.27 | 0.01 | 2.38 | 0.11 |
| 13. | Nadia | 3.11 | 3.66 | 0.55 | 3.82 | 0.16 | 4.42 | 0.60 |
| 14. | Purulia | 1.23 | 1.08 | -0.15 | 1.21 | 0.13 | 1.16 | -0.05 |
| 15. | 24-Parganas | 19.30 | 23.83 | 4.53 | 26.80 | 3.10 | 28.86 | 2.06 |
| 16. | West Dinajpore | 0.90 | 1.20 | 0.30 | 1.58 | 0.38 | 1.85 | 0.27 |
| 17. | State | 100.00 | 100.00 | 0.00 | 100.00 | 0.00 | 100.00 | 0.00 |

Table 14
Urban-Rural Growth Differential in West Bengal

| Districts | Year | Decadal Growth Rates Of | | | | Urban Rural Growth Differential | | | | |
|--------------------|------|-------------------------|-------|-------|-------|---------------------------------|-------|--------|-------|--------|
| | | 1961 | | 1971 | | 1981 | | 1961 | 1971 | 1981 |
| | | Urban | Rural | Urban | Rural | Urban | Rural | (1-2) | (3-4) | (5-6) |
| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| 01. Darjeeling | | 53.08 | 36.84 | 24.60 | 25.32 | 55.58 | 20.69 | 16.24 | -1.32 | 34.89 |
| 02. Jalpaiguri | | 23.63 | 45.63 | 32.05 | 28.05 | 84.94 | 19.83 | -22.00 | 4.00 | 65.11 |
| 03. Cooch Behar | | 42.38 | 52.72 | 35.28 | 38.93 | 26.58 | 25.18 | -10.34 | -3.65 | 1.4 |
| 04. West Dinajpore | | 77.20 | 80.48 | 69.52 | 37.67 | 54.04 | 26.62 | -3.28 | 31.85 | 27.42 |
| 05. Malda | | 44.47 | 29.78 | 33.95 | 31.89 | 42.88 | 25.45 | 14.69 | 2.06 | 17.43 |
| 06. Murshidabad | | 44.78 | 32.50 | 27.17 | 28.51 | 28.62 | 24.77 | 12.28 | -1.34 | 13.85 |
| 07. Nadia | | 60.82 | 49.23 | 34.54 | 29.63 | 52.65 | 86.82 | 11.59 | 4.91 | -34.17 |
| 08. 24-Parganas | | 67.76 | 32.05 | 43.21 | 27.93 | 42.64 | 19.62 | 35.71 | 15.28 | 23.02 |
| 09. Howrah | | 59.60 | 11.42 | 21.59 | 15.69 | 31.93 | 15.43 | 48.18 | 5.90 | 16.52 |
| 10. Calcutta | | 8.48 | - | 7.57 | - | 4.54 | - | 8.48 | 7.57 | 4.54 |
| 11. Hooghly | | 42.91 | 36.61 | 35.32 | 27.82 | 58.54 | 18.43 | 6.30 | 7.50 | 40.11 |
| 12. Burdwan | | 70.09 | 51.59 | 60.16 | 19.92 | 58.75 | 11.87 | 18.50 | 40.24 | 46.88 |
| 13. Birbhum | | 46.06 | 34.82 | 23.82 | 22.73 | 39.88 | 16.30 | 11.24 | 1.09 | 23.58 |
| 14. Bankura | | 29.11 | 25.94 | 24.21 | 21.82 | 19.40 | 10.69 | 3.17 | 2.39 | 2.71 |
| 15. Midnapore | | 32.19 | 29.02 | 25.69 | 26.99 | 36.62 | 20.84 | 3.17 | -1.30 | 15.78 |
| 16. Purulia | | 17.80 | - | 43.12 | 16.01 | 26.09 | 14.83 | - | 27.11 | 11.26 |
| 17. West Bengal | | 35.99 | 41.42 | 27.94 | 26.38 | 31.81 | 20.11 | -5.43 | 1.56 | 11.70 |

AN ANALYSIS OF THE GROWTH OF SMALL AND MEDIUM TOWNS IN WEST BENGAL, 1951-1981

Pabitra Giri

I Introduction

In a developing country, largely agricultural, with already a high population density (low land-man ratio) and a high rate of population growth, development would necessarily entail transfer of population from agriculture to non-agriculture and from rural sector to urban sector. Even a small rate of urbanization, defined as percentage increase in the proportion of urban population to total population, would lead to a high rate of urban growth and a huge absolute increase in the number of urban inhabitants. In developing countries, this urban growth has a marked tendency to concentrate in the primate and metropolitan cities.¹ There are two alternative views about the desirability of this pattern of urbanization. One view is that centralization of urban growth in big cities is inevitable, given the production and technological conditions, and is desirable, too, because big cities are more efficient.² According to the other view, centralized pattern of urbanization is neither inevitable nor desirable. Big cities may be more efficient in a short-term perspective but need not be so in the context of long run development. An alternative development pattern which is consistent with decentralized urbanization is feasible. Urban growth, in that case, would be spread out in many small and medium towns. It would avoid the costs of oversized metropolitan centres while also ensuring the spatial dispersion of growth process which is necessary for long run development in a vast, rural economy.³

Taking India as a whole, urban concentration is not very high. The rate of growth of cities, i.e. urban centres with 100000 or more inhabitants is only slightly faster than the rate of growth experienced by the lower order towns.⁴ However, there exist significant urban concentrations at the regional and state levels.⁵ One important instance of such urban concentration is West Bengal. From the pre-independence period, West Bengal inherited a highly concentrated pattern of urbanization; both spatial concentration as well as in terms of size. Since independence, this urban concentration has

somewhat declined and one could hypothesize that this has been caused by the growth of small and medium towns in West Bengal. An examination of this issue in depth would involve two queries : first, how far the growth of lower order towns has caused deconcentration; and then to examine how far it conforms to the alternative vision of decentralized urbanization ?

This study has been divided into seven sections. Section II, deals with the definitions used. Section III indicates the changing pattern of urban concentration in West Bengal and the importance of medium and small towns in the process. Section IV considers the growth pattern of small and medium towns, and the importance of migration in case of these towns. Section V studies the main features of such in-migration. Section VI analyses the functional character of medium and small towns and its change over time in order to reveal the economic processes underlying their growth. In the final section, we have a few concluding comments on the growth pattern of the medium and small towns in West Bengal.

II Definitions

Here we have followed the definition of an urban area as given in Census of India⁶ but while the Census of India classifies the towns in six size-categories, we have used three size-categories in our analysis, namely, city, medium town and small town. The correspondence between the two classifications is indicated in Table 1.

We have subdivided West Bengal into five areas for examining spatial dimension of urban growth and concentration in the state (see Table 2). First, the Calcutta Urban Agglomeration⁷, as defined in Census of India 1981, consists of Calcutta and contiguous cities and towns on either side of the river Hooghly. Second, Asansol and Durgapur subdivision of Burdwan district (Asansol Durgapur subdivision). Historically, urban development in this area was based on mining and mining-based industries. Since the early 1960s large-scale public sector investment, particularly in the iron and steel industries, has been responsible for the accelerated urban growth. Third, the area consisting of the Bankura and Purulia districts and Jhargram subdivision of Midnapore district (Bankura-Purulia-Jhargram). This area has a semi-arid environment, agriculture is not prosperous; nor is there much of industry excepting the traditional ones. Fourth, the area covering the rest of southern West Bengal, i.e. excluding the former three categories (Rest of Southern West Bengal). This area is by and large agricultural excepting some

concentrations of traditional industries in some parts. Agriculture is, in general, prosperous. In a large part of it, in Burdwan, Hooghly, Nadia and Murshidabad, there has been, since early 1970s, a market growth in agriculture based on new technology. Fifth, the area covering the five northern districts of West Bengal (Northern District of West Bengal). It has hilly tracts as well as plains. This area lacked direct rail and road links with the rest of West Bengal until the end of the 1960s, when the Farrakka bridge was commissioned. The plantation industry and the hill-station of Darjeeling were the main causes of urban growth before independence.

III Urban Concentration and Small and Medium Towns in West Bengal

Urban concentration has two aspects : one is the concentration of urban population in big cities (size concentration); the other is the concentration of urban population in a particular area (spatial concentration). Despite their conceptual distinctiveness, in reality these two may be correlated. The case for emphasizing on the medium and small towns is derived as much from the need for spatial dispersion of urbanization as from the argument against size-concentration.

Table 3 indicates the nature and extent of size-concentration of urban population in West Bengal. Here two ways of organizing size-distribution of urban population have been considered. One is by treating an urban agglomeration⁸ as an integral unit and classifying it according to its total population. The second method is to treat the constituent towns of an urban agglomeration as separate units and to classify them accordingly. It can be observed from Table 3 that size distributions derived by either method indicate that size-concentration in West Bengal is higher compared to the all-India figure. Between the two the figures are considerably higher when urban agglomerations are not decomposed into smaller units.

Since 1951 size-concentration of urban population in West Bengal has declined slightly; the share of cities in total urban population having gone down from 59% in 1951 to 56% in 1981—a three point decrease over three decades. However, size-concentration in this state continues to be higher than the all-India average, while the latter has increased perceptibly since independence.

Table 4 on spatial concentration of urban population in West Bengal shows that while in 1951, 74% of the urban population was in the Calcutta Urban Agglomeration alone, by 1981, the share of the

Calcutta Urban Agglomeration dropped to 63%. The share of other areas, however, did not increase uniformly : that of the industrially growing Asansol-Durgapur subdivision area more than doubled, those of the rest of southern West Bengal, and the northern districts of West Bengal, increased by 29 and 62% respectively, while the share of Bankura-Purulia-Jhargram declined. No systematic spatial dispersion has occurred. Besides, during 1951-81, the growth in the relative importance of the medium-sized towns in an area was negatively related to that for small towns; in the Calcutta Urban Agglomeration and Asansol Durgapur subdivision, the share of the medium-sized towns dropped, while that for the small towns increased; and just the opposite happened in cases of the northern districts of West Bengal and the rest of the southern west Bengal.

One explanation for this is the pattern of growth of new towns (normally they are small towns) in West Bengal. From Table 5, it is evident that, in all the three decades during 1951-81 the Calcutta Urban Agglomeration and the Asansol-Durgapur subdivision taken together accounted for more than 60% of new town population. New towns are, therefore, seen as contributing to spatial deconcentration in the case of West Bengal, but such deconcentration operated within broader regions with concentrated urban population.

IV Growth of Small and Medium Towns in West Bengal

Apart from the concentration issue, a related but somewhat different point is whether there is positive relationship between town size and growth rate (measured by population growth) : whether the cities are growing faster than the medium and small towns. A positive relationship between size and growth rate may lead to increased urban concentration, but it is neither necessary nor sufficient. Change in the size distribution of urban population between two points of time is determined by three factors : (a) relative rate of growth in different size-classes of towns; (b) inter-class promotion (demotion) of towns as population increases (decreases); (c) the emergence of new towns, normally in the small town category. Therefore, even with a *positive relationship* between size and growth rate, size-distribution may not get skewed; or, even without it size-distribution may get skewed. It all depends on how the other factors change. Of course, with a positive relationship between size and growth, chances are more that concentration would increase.

In Table 6, size-class-specific growth rates are computed with reference to the towns belonging to the class in the base period. Here

estimated average decadal growth rates (henceforth, 'growth rate') for different size-classes, areas and decades have been shown.

At the All-India level the cities are growing faster than the towns though the difference is not large.¹⁰ In contrast, in West Bengal the growth rate of the cities is slower than that of the medium and small towns. The growth rate of the cities varied in the range of 14 to 18%, during the decades of 1951-81. In the same period the growth rate of the medium-sized towns varied from 28 to 37% and that of the small towns from 30 to 42%. Decomposition of the city growth rate by city-size categories (in Table 7) indicates that the slow growth rate of the cities in West Bengal is largely due to the extremely slow growth rate of the biggest of them all, Calcutta city,¹¹ which, in 1971, accounted for more than half of the total city population in the state. When Calcutta is excluded, it is seen that the rate of growth of other cities does not compare unfavourably with the growth rate of medium and small towns.

Growth of an urban area, measured by population growth, is the net result of natural growth (difference between number of births and number of deaths) plus in-migration minus out-migration. The figures would indicate net in-migration if population growth exceeds natural growth; and net out-migration, if the reverse becomes true.

It can be expected that urban natural growth rate will vary inversely with the size of the urban centre. It would be lower in metropolitan cities; higher in medium and small towns. In the metropolitan cities various socio-economic forces keep birth rate down. Besides, in the underdeveloped countries in the metropolitan cities, lone male migrants constitute a sizeable proportion of migrants¹² which, too, contribute to lower the natural growth rate in the cities. While in small towns, the natural growth rate is likely to be close to the rural rate.

However differential natural growth rate does not provide complete explanation for the relatively high growth rate of the small and medium towns in West Bengal. Available estimates of natural growth rates over time suggest that a decadal growth rate to the tune of 25% would be a reasonable upper limit for natural growth rates in urban West Bengal.¹³ Since the observed growth rates of medium sized and small towns in West Bengal, in most cases, exceed this mark, it may be presumed that net in-migration also plays an important role in their case.

We shall consider the migration aspect latter. At present we shall

examine the area-wise variation in the growth of medium and small towns. It should be remembered, that not all the towns in an area grow uniformly. Even where small and medium towns register on an average a high growth rate, some old towns, or towns away from the locus of development, may show decline. Distribution of towns by decadal growth rate in each area is shown in Table 8.

So far as spatial variation of medium and small towns growth is concerned, taking towns in the base year only, it could be noted from Table 7 that a high (in the sense of decadal growth rate being above 25%) overall urban growth rate in an area is not necessarily associated with a high growth rate of small and medium towns or vice-versa.

In the Calcutta Urban Agglomeration, though the growth rate of all urban centres is low, and not exceeding 20% in any of the decades considered, the medium and small towns, however, show relatively higher growth rate; particularly the small towns in all the three decades. In the Asansol-Durgapur subdivision overall urban growth is very high; but the performance of the small towns is poor excepting the period 1951-61, and the rate of growth of the medium-sized towns is far from impressive. During 1961-71 the medium sized towns in this area exhibited a rate of growth as high as 101%; however, when Durgapur town with a phenomenal rate of growth is excluded, the rate of growth of medium towns would come down to 23%. In Bankura-Purulia-Jhargram area the rate of growth of all types of urban centres is slow, excepting in the 1950s when small towns had a relatively high growth rate. In the rest of southern West Bengal, urban growth rate is high for all categories, varying over the decades from 25% to 34%. In the 1950s the growth of medium and small towns in this area was high, but during the 1960s the growth was moderate. The rate of growth of small towns is notably high in this area—44% during 1971-81, a period of significant agricultural development. In the northern districts of West Bengal overall urban growth rate is high—varying between 33 and 42%, the growth of both the medium-sized and the small towns being high—in all the decades, particularly during the 1950s.

V In-migration to Small and Medium Towns in West Bengal

In almost all cases, the growth of medium and small towns has been significantly boosted by in-migration. However, migration statistics for individual urban centres is not available, though the Census of India 1951, 1961, and 1971 provide such data at district level or above with rural-urban break-up.¹⁴ Furthermore, detailed data on

intra-district, inter-district but intra-state, inter-state and international migration are available from the Census of India for 1961 and 1971, (1981 figures have not yet been published).

Table 9 shows the percentage variations in the number of in-migrants to urban areas in each district classified by origin (birth place). In case of migrants from outside India, only those from Pakistan (now Pakistan and Bangladesh) have been shown because of their overwhelming numerical dominance. In Table 10 the variations in the number of migrants expressed as the percentage of urban population in the district in the base year have been given.

In general, it can be observed, that during the years of 1951-61, all streams of urban in-migrants—inter-district inter-state, and from Pakistan—increased in most of the districts, barring the following exceptions; inter-district urban in-migrants diminished in Calcutta; inter-state urban in-migrants diminished in 24-Parganas and Midnapore and urban in-migrants from Pakistan decreased in Calcutta, Howrah and Murshidabad. During the period of 1961-71, urban in-migrants from other states declined in most of the districts; the factors likely to have been responsible for it were : industrial stagnation in West Bengal since mid-60s, growth of industries in the neighbouring states and the political turmoils in West Bengal around 1971. Urban in-migrants from Pakistan increased in all the border districts except Nadia; but the increase was low in general, in comparison with the corresponding figures for 1951-61. Inter-district urban in-migrants increased in all the districts except Calcutta, Howrah and Purulia. In a number of districts the increase was higher in 1961-71 than in 1951-61. In fine, during 1951-61, apart from inter-district migration, inter-state in-migration and displaced migration from Pakistan were important components of urban growth. By contrast, during 1961-71, it was the inter-district migration which emerged as the more important factor, though, in some of the border districts, in-migration from Pakistan was more significant.

Going back to the five broad regions discussed above, in the northern districts of West Bengal, where urban areas consist of medium-sized or small towns, migration of refugees from Pakistan exceeded flows from other areas both during 1951-61 and 1961-71 (see Table 10). In the case of the Calcutta Urban Agglomeration, the very low decadal growth rates of Calcutta city during 1951-61 (8.5%) and 1961-71 (7.5%) were at least in part due to fall in migration from other states (1961-71) and in the refugee inflow. However, the high

decadal growth rates of the other towns in this area were due to the influx of refugees (24-Pargannas, 1951-61, 1961-71) and migration from outside the state (Howrah and Hooghly 1951-61). In the rest of southern West Bengal refugee inflow exceeded the other types in-migratory flows in Nadia (1951-61) and in Murshidabad (1961-71). By contrast, inter-district migration outweighs the other flows in the interior districts like Burdwan, Birbhum (1951-61), Bankura (1951-61) and Purulia (1961-71).

VI Functional Characteristics of Small and Medium Towns in West Bengal

Apart from variations of population flows, there are economic changes associated with the growth of small and medium towns.

Here, we analyse the functional characteristics of the small and medium towns in West Bengal and changes in those over time, which provide tentative indications about the nature of economic expansion that has occurred. Because of data limitation, the analysis is confined to the decade of 1961-71 only.

The structure of economic activity could be studied in terms of the share of activities in the town's domestic product or employment. No comprehensive data on domestic product at the town level are available. Data on workers among the inhabitants of towns, classified into nine economic activities, are obtained from Census of India 1961 and 1971. It may be used for employment¹⁵ at the town level provided we assume that the phenomenon of commuting workers (for whom the place of residence differs from the place of work) is negligible. The assumption is likely to be satisfied in most urban centres excepting those located in the Calcutta Urban Agglomeration area.¹⁶

We have used the main functional type of classification of towns in India by Mitra, Sherry and Dutta¹⁷. They have classified towns into three main functional types, namely, manufacturing, trade and transport, and services. The relationship between Census economic activity classification of workers and those function types is shown in Table 11. Since agriculture is not an activity located within the town, workers engaged in agriculture (consisting of cultivators and agricultural labourers) have been excluded. The number of workers engaged in each function type is expressed as a percentage of the total of non-agricultural workers. The function having the highest proportion of non-agricultural workers in a town, is taken as the main function of the town.

Table 12 shows the distribution by size class of towns in West Bengal in 1961 Census, (size determined by 1961 population) and main function type as observed in 1961 and in 1971.

It can be noted, from Table 12, that the majority of the medium and small towns in the Calcutta Urban Agglomeration and Asansol-Durgapur subdivision area in 1961 had manufacturing as their main function. It is also true of the Bankura-Purulia-Jhargram area in 1961; but it should be mentioned here, that industries in this area are mostly the traditional ones. In the rest of southern West Bengal area the majority of the small and medium towns have service as their main function; only one-fourth of the medium-sized towns and one-third of the small towns have manufacturing as their main function. In many of these manufacturing towns, a sizeable proportion of manufacturing activities is accounted for by traditional crafts. In the northern districts of West Bengal it should be noted that no town has manufacturing as its main function; the majority of the medium towns has service as its main function and for more than two-thirds of the small towns, trading and transport is the main function. It may be concluded, therefore, that outside the metropolitan neighbourhood of the Calcutta Urban Agglomeration and the industrial belt of Asansol-Durgapur subdivision, the small and medium towns by and large are based on trade, transport and service activities. Exceptions are towns with concentration of handicrafts and traditional industries.

During the years of 1961-71, it can be observed, from Table 12 again, that the number of medium and small towns with manufacturing as the main function dropped. The number of medium and small towns with service as the main function also declined. Correspondingly, small and medium towns, with trade and transport as their main function, increased in number. In other words over the years, some of the medium and small towns have moved from manufacturing and service to trading and transport. In rest of southern West Bengal as many as ten towns with service as their main function in 1961 had trade and transport as their main function in 1971. The same is true of Bankura, Purulia and Jhargram, and the rest of southern West Bengal. This implies not only relative growth of trade and transport activities but a probable decline of traditional industries in the medium and small towns in West Bengal.

Thus, it seems to be a plausible hypothesis that during 1961-71, the growth of medium and small towns in non-industrial non-

metropolitan area is primarily related to the growth of trading and transport activities.

VII Conclusion

There are broadly two alternative scenarios of urbanization. The first one envisages a high level of concentration of urban population in a few big metropolitan cities, while the second one visualizes an integrated hierarchy of towns, with a large number of small and medium towns evenly distributed over space. Adopting this second scenario, one might be concerned with two objectives : (a) containing the growth of the metropolitan cities; (b) promoting integrated spatial and regional development. Future urbanization in West Bengal has to fulfill both of these objectives. High growth rate of the small and medium towns, as far as it takes place in the Calcutta Urban Agglomeration area, frustrates the goal of reducing spatial concentration. On the other hand, the high growth of cities outside the Calcutta Urban Agglomeration area is not consistent with the reduction of size concentration. What is needed, further, is not merely fast growth of existing small and medium towns, but also the growth of new towns in less urbanized area. In the case of West Bengal, it has been shown that new town growth is relatively high in the metropolitan area of the Calcutta Urban Agglomeration and the industrial developing area of the Asansol-Durgapur subdivision which shows the weakness of the existing pattern of small and medium town growth.

Table 1
Correspondence between Census of India Size Classification of Urban Centres and Size Classification Used in The Paper

| Census of India Town class | Classification population size | Classification used in the paper |
|----------------------------|--------------------------------|---------------------------------------|
| 1. Class 1 | 1,00,000 and above | 1. City |
| 2. Class 2 | 50,000 – 99,999 | 2. Medium Town. 3. Small Town. |
| 3. Class 3 | 20,000 – 49,999 | |
| 4. Class 4 | 10,000 – 19,999 | |
| 5. Class 5 | 5,000 – 9,999 | |
| 6. Class 6 | below 5,000 | |

Source : *Census of India, 1971, Series 1 (India) Part 2A (i) General Population Tables.*

Table 2
Division of Areas within West Bengal

| Area | Code | Description |
|---------------------------------------|----------|---|
| 1. Calcutta Urban Agglomeration | C.U.A. | Calcutta city, towns and cities of Howrah, Hooghly, 24-Pargannas and Nadia, included in Calcutta Urban Agglomeration in Census of India 1981. |
| 2. Asansol-Durgapur | A.D.S. | Asansol and Durgapur subdivisions of Burdwan District |
| 3. Bankura-Purulia-Jhargram | B.P.J. | Bankura and Purulia Districts and Jhargram subdivisions of Midnapore. |
| 4. Rest of Southern West Bengal. | R.S.W.B. | Murshidabad, Birbhum Burdwan (excluding A.D.S.); Howrah, Hooghly, 24-Pargannas and Nadia districts (excluding C.U.A. parts) Midnapore district (excluding B.P.J. part). |
| 5. Northern Districts of West Bengal. | N.D.W.B. | Darjeeling, Jalpaiguri, Cooch Behar, West Dinajpur and Malda districts. |

Table 3

Size-distribution of urban population in West Bengal and India

| | City | Medium town | Small town | All urban | Urban populn. (10 ⁵) |
|---|-------------------|-------------|------------|-----------|----------------------------------|
| A. Urban Agglomeration classified according to total population³. | | | | | |
| West Bengal. | | | | | |
| 1951 ² | 75.1 | 14.7 | 10.2 | 100 | 62.8 |
| 1962 ² | 72.1 | 19.0 | 8.8 | 100 | 85.4 |
| 1971 ² | 71.0 ² | 21.5 | 7.5 | 100 | 109.7 |
| 1981 ⁴ | 76.8 | 18.5 | 4.7 | 100 | 144.3 |
| India. | | | | | |
| 1951 ² | 43.4 | 26.3 | 30.3 | 100 | 624.0 |
| 1961 ² | 50.2 | 28.6 | 21.2 | 100 | 789.0 |
| 1971 ² | 55.8 | 27.0 | 16.5 | 100 | 1,090.0 |
| 1981 ^{4,5} | 60.4 | 26.0 | 13.6 | 100 | 1,561.9 |
| B. Constituent towns of Urban Agglomeration considered as separate units | | | | | |
| West Bengal | | | | | |
| 1951 | 58.9 | 29.2 | 11.9 | 100 | 62.8 |
| 1961 | 55.5 | 32.4 | 12.1 | 100 | 85.4 |
| 1971 | 55.6 | 33.1 | 11.3 | 100 | 109.7 |
| 1981 | 56.1 | 31.0 | 13.0 | 100 | 144.3 |
| India | | | | | |
| 1951 ³ | 38.0 | 30.0 | 32.0 | 100 | 624.0 |
| 1961 ³ | 44.5 | 32.0 | 23.5 | 100 | 789.0 |
| 1971 ³ | 48.9 | 31.8 | 19.3 | 100 | 1,090.0 |

Sources and Notes : (1) Size distribution of 1981 cannot be compared with those of the earlier years because the demarcation of urban agglomerations has changed.

(2) Percentage figures collected from *Census of India 1971, Series I (India) Part 2A(i) General Population Tables, Statement 16, pp. 205-207.*

Table 3 (Continued)

- Sources and Notes : (3) Percentage figures collected from *Census of India 1971, series 1 (India) Part 2A (i) General Population Tables*, Statement 3, p. 183.
- (4) *Census Of India 1981, Series 1 (India) Paper 2 of 1981 Provisional Population Totals, Rural-urban Distribution*, Statement 8, pp. 30-31.
- (5) Excludes Assam and Jammu-Kashmir.

Table 4

**Spatial Distribution of Urban Population in West Bengal
1951, 1981 (percentage)**

| | Year | C.U.A. | A.D.S. | B.P.J. | R.S.W.B. | NDWB | West Bengal |
|-------------|------|--------|--------|--------|----------|------|-------------|
| City | 1951 | 56.5 | — | — | 2.1 | — | 58.6 |
| | 1981 | 47.2 | 3.4 | — | 3.6 | 1.8 | 56.0 |
| Medium Town | 1951 | 16.0 | 2.1 | 1.8 | 6.6 | 3.1 | 29.6 |
| | 1981 | 12.0 | 1.9 | 1.8 | 11.1 | 4.2 | 31.0 |
| Small Town | 1951 | 2.0 | 1.1 | 1.1 | 6.1 | 1.5 | 11.8 |
| | 1981 | 4.3 | 2.5 | 0.8 | 4.0 | 1.4 | 13.0 |
| All Urban | 1951 | 74.5 | 3.2 | 2.9 | 14.8 | 4.6 | 100.0 |
| | 1981 | 63.5 | 7.8 | 2.6 | 18.7 | 7.4 | 100.0 |

Source : Computed from data provided in

- (i) *Census of India, 1971, Series 22 (West Bengal) Part 2A, General Population Tables.*
- (ii) *Census of India, 1981, Series 23 (West Bengal) Paper 1 of 1981 (supplement), Provisional Population Totals.*

Table 5

Area-wise Distribution of New Town Population in West Bengal (percentages)

| Area | 1951-1961 | 1961-1971 | 1971-1981 |
|----------|-----------|-----------|-----------|
| C.U.A. | 48.6 | 60.0 | 27.7 |
| A.D.S. | 14.4 | 5.2 | 32.8 |
| B.P.J. | 0.0 | 5.1 | 0.7 |
| R.S.W.B. | 26.6 | 20.7 | 20.5 |

Table 5 (Continued)

| | | | |
|----------------------------------|-------|-------|-------|
| N.D.W.B. | 10.4 | 9.0 | 18.3 |
| West Bengal | 100.0 | 100.0 | 100.0 |
| Population in new town ('000) | 786.6 | 360.5 | 744.6 |

Source : Same as in Table 4.

Table 6
Urban Growth rates in West Bengal

| Area and period | Average decadal growth rate | | | | Urban growth in new town ² |
|-----------------------|-----------------------------|----------------|---------------|-----------------------------|---|
| | City | Medium town | Small town | All (base year) urban | |
| C.U.A. | | | | | |
| 1951-61 | 13.6 | 40.9 | 46.7 | 20.3 | 8.0 |
| 1961-71 | 14.4 | 35.7 | 40.2 | 20.4 | 3.6 |
| 1971-81 | 15.6 | 27.5 | 40.3 | 19.4 | 2.7 |
| A.D.S. | | | | | |
| 1951-61 | — | 25.6 | 52.0 | 34.6 | 54.8 |
| 1961-71 | 50.8 | 101.2 | 0.6 | 66.4 | 4.9 |
| 1971-81 | 34.8 | 28.4 | 23.1 | 31.2 | 36.2 |
| B.P.J. | | | | | |
| 1951-61 | — | 23.6 | 30.8 | 26.2 | — |
| 1961-71 | — | 23.3 | 26.9 | 24.6 | 8.0 |
| 1971-81 | — | 23.4 | 18.6 | 21.4 | 1.7 |
| R.S.W.B. | | | | | |
| 1951-61 | 13.6 | 36.1 | 39.3 | 33.7 | 22.0 |
| 1961-71 | 19.2 | 26.1 | 27.9 | 25.4 | 5.1 |
| 1971-81 | 32.2 | 27.4 | 43.6 | 31.8 | 8.0 |
| N.D.W.B. | | | | | |
| 1951-61 | — | 38.5 | 50.6 | 42.3 | 27.7 |
| 1961-71 | — | 35.1 | 29.7 | 33.6 | 6.6 |
| 1971-81 | — | 35.9 | 31.4 | 34.7 | 19.4 |
| West Bengal | | | | | |
| 1951-61 | 13.6 | 37.1 | 42.4 | 24.0 | 12.2 |
| 1961-71 | 15.5 | 37.0 | 29.7 | 24.2 | 4.2 |
| 1971-81 | 17.6 | 28.1 | 37.6 | 23.3 | 6.7 |

Table 6 (Continued)

‘—’ Not relevant.

1. For definition and methodology of estimation of the urban growth rates see Note 9f below.
2. Proportion of new town (classified as urban in the terminal *Census* year) population in the terminal year to all urban population in the area in the base year.

Source : Computed from data from (i) *Census of India 1971 Series 22 (West Bengal) Part 2A, General Population Tables*.

(ii) *Census of India 1981, Series 2. (West Bengal) Part 2A, Paper 1 of 1981 (Supplement) Provisional Population Totals.*

Table 7
West Bengal City Growth Rates by City Size

| City Size | 1951-1961 | 1961-1971 | 1971-1981 |
|--------------------|--------------|---------------|---------------|
| 1.0 million plus | 8.47 (1) | 7.56 (1) | 4.54 (1) |
| 0.5 to 1.0 million | — | 16.41 (1) | 19.26 (1) |
| 0.1 to 0.5 million | 27.78 (5) | 34.75 (9) | 34.87 (12) |
| All | 13.60 (6) | 15.50 (11) | 17.60 (14) |

Note : Figures in brackets indicate number of cities.

Source : Same as in Table 6.

Table 8
Distribution of towns by decadal growth rates in West Bengal

| Area/ Period | Percentage variation over the decade | | | | | | Total |
|-----------------|--------------------------------------|----------|-------|-------|-------|-----------|-------|
| | Size Class | Below 15 | 15-25 | 25-50 | 50-75 | 75- above | |
| C.U.A. | | | | | | | |
| 1951-61 | C | 2 | 1 | 1 | — | 1 | 5 |
| | M | 4 | 3 | 9 | 2 | 4 | 22 |
| | ST | 3 | — | 3 | 1 | 2 | 9 |

Table 8 (Continued)

| Area/ Period | Size Class | Percentage variation over the decade | | | | | Total |
|---------------------|---------------|--------------------------------------|-------|-------|-------|--------------|-------|
| | | Below 15 | 15-25 | 25-50 | 50-75 | 75- above | |
| 1961-71 | C | 1 | 3 | 3 | 1 | — | 8 |
| | MT | 4 | 3 | 11 | 8 | 1 | 27 |
| | ST | 11 | 2 | 11 | 5 | 4 | 33 |
| 1971-81 | C | 1 | 5 | 5 | — | 1 | 12 |
| | MT | 5 | 5 | 17 | 3 | 1 | 31 |
| | ST | 6 | 5 | 14 | 11 | 4 | 40 |
| A.D.S. 1951-61 | C | — | — | — | — | — | — |
| | MT | 1 | 1 | 1 | — | — | 3 |
| | ST | 2 | 1 | 1 | — | 2 | 6 |
| 1961-71 | C | — | — | — | 1 | — | 1 |
| | MT | 1 | — | 4 | — | 1 | 6 |
| | ST | 5 | — | 1 | — | — | 6 |
| 1971-81 | C | — | 1 | — | — | 1 | 2 |
| | MT | 2 | 1 | 1 | 2 | — | 6 |
| | ST | 1 | 4 | 2 | 1 | — | 8 |
| B.P.J. 1951-61 | C | — | — | — | — | — | — |
| | MT | — | 1 | 2 | — | — | 3 |
| | ST | — | 5 | 1 | 1 | 1 | 8 |
| 1961-71 | C | — | — | — | — | — | — |
| | MT | — | 2 | 1 | — | — | 3 |
| | ST | 1 | 3 | 4 | — | — | 8 |
| 1971-81 | C | — | — | — | — | — | — |
| | MT | — | 1 | 2 | — | — | 3 |
| | ST | 3 | 5 | 2 | — | — | 10 |
| R.S.W.B. 1951-61 | C | 1 | — | — | — | — | 1 |
| | MT | 1 | 1 | 5 | 1 | 1 | 9 |
| | ST | 5 | 2 | 17 | 6 | 3 | 33 |
| 1961-71 | C | 1 | — | 1 | — | — | 2 |
| | MT | 2 | 9 | 9 | — | 1 | 21 |
| | ST | 8 | 11 | 17 | 3 | 1 | 40 |

Table 8 (Continued)

| Area/ Period | Size Class | Percentage variation over the decade | | | | | Total |
|-------------------------|---------------|--------------------------------------|-------|-------|-------|-------------|-------|
| | | Below 15 | 15-25 | 25-50 | 50-75 | 75 above | |
| 1971-81 | C | - | 1 | - | - | 1 | 2 |
| | MT | 2 | 8 | 19 | - | - | 29 |
| | ST | 2 | 8 | 20 | 6 | 4 | 40 |
| N.D.W.B. 1951-61 | C | - | - | - | - | - | - |
| | MT | - | 3 | 2 | - | 1 | 6 |
| | ST | 3 | - | 4 | 2 | 2 | 11 |
| 1961-71 | C | - | - | - | - | - | - |
| | MT | 3 | - | 4 | - | 2 | 9 |
| | ST | 5 | 4 | 4 | 3 | - | 16 |
| 1971-81 | C | - | - | - | - | - | - |
| | MT | 1 | 3 | 4 | 2 | - | 10 |
| | ST | 3 | 4 | 8 | 3 | - | 18 |
| West Bengal. 1951-61 | C | 3 | 1 | 1 | - | 1 | 6 |
| | MT | 6 | 9 | 19 | 3 | 6 | 43 |
| | ST | 13 | 8 | 26 | 10 | 10 | 67 |
| 1961-71 | C | 2 | 3 | 4 | 2 | - | 11 |
| | MT | 10 | 14 | 29 | 8 | 5 | 66 |
| | ST | 30 | 20 | 37 | 11 | 5 | 103 |
| 1971-81 | C | 1 | 7 | 5 | - | 3 | 16 |
| | MT | 10 | 18 | 43 | 7 | -1 | 77 |
| | ST | 15 | 26 | 46 | 21 | 8 | 116 |

Source : As in Table 6.

Table 9(a)
Change in number of urban in-migrants in districts of
West Bengal. (in '00)

| Districts | 1951-1961 | | | | 1961-1971 | | |
|---------------|-------------|-------------|----------------|--------------------------|-------------|-------------|-----------------|
| | Inter dist. | Inter state | From Pakis-tan | Intra-dist. ¹ | Inter dist. | Inter State | From Pakis-tan* |
| Darjeeling | 33 | 101 | 70 | -30 | 51 | 13 | 47 |
| Jalpaiguri | 37 | 36 | 122 | 31 | 24 | 13 | 33 |
| Cooch Behar | 19 | 34 | 34 | -12 | 25 | -21 | 21 |
| West Dinajpur | 30 | 85 | 233 | 23 | 38 | -3 | 123 |
| Malda | 16 | 19 | 15 | 14 | 23 | -2 | 38 |
| N.D.W.B. | 135 | 275 | 474 | 26 | 161 | 0 | 262 |
| Murshidabad | 16 | 10 | -36 | -24 | 76 | -3 | 84 |
| Nadia | 99 | 26 | 309 | 31 | 102 | -4 | -28 |
| 24-Parganas | 452 | -172 | 1,235 | -274 | 597 | -137 | 852 |
| Calcutta | -33 | 26 | -1,575 | - | -923 | -1,450 | -2,415 |
| Howrah | 271 | 1,118 | -11 | -254 | -304 | -580 | -243 |
| Hooghly | 409 | 371 | 426 | -84 | 28 | -169 | 2 |
| Midnapore | 43 | -124 | 44 | 74 | 46 | 24 | -12 |
| Purulia | - | - | - | 48 | 64 | 47 | 12 |
| Bankura | 29 | 14 | 6 | -23 | -4 | -14 | -7 |
| Birbhum | 90 | 71 | 23 | 15 | 19 | 2 | -32 |
| Burdwan | 296 | 254 | 245 | -190 | 427 | 18 | 136 |

*Includes present day Bangladesh.

'-' Not available.

¹Intra district rural-urban migration only.

Source :- (1) *Census of India 1951, Vol. 6, (West Bengal and Sikkim) District Census Handbooks.*

(2) *Census of India 1961, Vol. 16, (West Bengal) Part 2D (i) and (ii), Migration Tables.*

(3) *Census of India 1971, Series 22 (West Bengal) Part 2D (i) and (ii), Migration Tables.*

Table 9(b)
**Change in number of urban in-migrants expressed as
percentage of base year urban population in the
district**

| Districts. | 1951-1961 | | | | 1961-1971 | | |
|---------------|----------------|----------------|-----------------------|-----------------------------|----------------|----------------|-----------------------|
| | Inter dist. | Inter State | From Pakis- tan | Intra Dist. ¹ | Inter dist. | Inter State | From Pakis- tan |
| Darjeeling | 3.5 | 10.7 | 7.4 | -2.1 | 3.5 | 0.9 | 3.3 |
| Jalpaiguri | 5.6 | 5.5 | 18.4 | 2.5 | 1.9 | 1.1 | 2.6 |
| Cooch Behar | 3.8 | 6.9 | 6.8 | -1.7 | 3.4 | -2.9 | 2.9 |
| West Dinajpur | 7.1 | 20.2 | 55.6 | 2.4 | 3.8 | -0.3 | 12.4 |
| Malda | 4.5 | 5.4 | 4.3 | 2.8 | 4.4 | -0.3 | 7.4 |
| N.D.W.B. | 4.7 | 9.6 | 16.7 | 0.6 | 3.3 | 0.0 | 5.3 |
| Murshidabad | 1.2 | 0.7 | -2.6 | -1.2 | 3.9 | -0.1 | 4.3 |
| Nadia | 4.7 | 1.3 | 14.8 | 1.0 | 3.2 | -0.1 | -0.9 |
| 24-Parganas | 3.3 | -1.3 | 9.0 | -1.4 | 3.0 | -0.7 | 4.2 |
| Calcutta | -0.1 | 0.1 | -6.2 | - | -3.2 | -4.9 | -8.2 |
| Howrah | 5.2 | 21.4 | -0.2 | -3.1 | -3.7 | -7.9 | -3.0 |
| Hooghly | 10.4 | 9.4 | 10.8 | -1.4 | 0.5 | -2.9 | 0.0 |
| Midnapore | 1.7 | -4.9 | 1.7 | 2.2 | 1.4 | 0.7 | -0.4 |
| Purulia | - | - | - | 5.1 | 6.9 | 5.1 | 1.3 |
| Bankura | 3.1 | 1.5 | 0.7 | -1.9 | -0.3 | -1.1 | -0.5 |
| Birbhum | 13.0 | 10.3 | 3.3 | 1.5 | 1.9 | 5.1 | -5.2 |
| Burdwan | 9.1 | 7.8 | 7.6 | -3.4 | 7.6 | 0.3 | 2.4 |

Table 10
**Relation between Census economic activity classifica-
tion and function type**

| Census economic activity classification | Function type |
|--|------------------|
| 1. Cultivator | 1. Manufacturing |
| 2. Agricultural Labour | |
| 3. Activities Allied to agriculture, e.g. animal husbandry, plantations etc } | |

Table 10 (Continued)

| Census economic activity classification | Function type |
|---|------------------------|
| 4. Mining and Quarrying | 1. Manufacturing |
| 5. (a) Household manufacturing (b) Non-household manufacturing | |
| 6. Trade and Commerce | |
| 7. Transport Storage and Communications | 2. Trade and Transport |
| 8. Services. | 3. Services |

Table 11

Distribution of towns in West Bengal in 1961 and 1971
by population size and functional type

| Area | 1961 Popula- tion size | Functional | | | Type. | | |
|----------|---------------------------------|------------|----|----|-------|----|----|
| | | 1961 | | | 1971 | | |
| | | M | T | S | M | T | S |
| C.U.A. | C | 7 | 1 | 0 | 6 | 1 | 1 |
| | MT | 23 | 0 | 2 | 22 | 2 | 1 |
| | ST | 18 | 2 | 5 | 18 | 3 | 4 |
| A.D.S. | C | 0 | 1 | 0 | 0 | 1 | 0 |
| | MT | 5 | 0 | 0 | 4 | 1 | 0 |
| | ST | 4 | 2 | 0 | 3 | 3 | 0 |
| B.P.J. | C | 0 | 0 | 0 | 0 | 0 | 0 |
| | MT | 2 | 0 | 1 | 1 | 0 | 2 |
| | ST | 6 | 1 | 1 | 3 | 4 | 1 |
| R.S.W.B. | C | 0 | 1 | 1 | 0 | 1 | 1 |
| | MT | 5 | 5 | 11 | 4 | 7 | 10 |
| | ST | 12 | 7 | 21 | 9 | 20 | 11 |
| N.D.W.B. | C | 0 | 0 | 0 | 0 | 0 | 0 |
| | MT | 0 | 3 | 6 | 0 | 4 | 5 |
| | ST | 0 | 11 | 4 | 0 | 13 | 2 |

Table 11 (Continued)

| Area | 1961 | Functional Type | | | | | |
|------|-------------------------|-----------------|----|----|------|----|----|
| | Popula- tion size | 1961 | | | 1971 | | |
| | | M | T | S | M | T | S |
| W.B. | C | 7 | 3 | 1 | 6 | 3 | 2 |
| | MT | 35 | 8 | 20 | 31 | 14 | 8 |
| | ST | 40 | 23 | 31 | 33 | 43 | 18 |

Notes : C = City, MT = Medium Town, ST = Small Town,
M = Manufacturing, T = Trade and transport, S = Service

Sources : Computed on the basis of Table in A. Mitra, S.B.L. Sherry
and B. Dutta, *Shifts in the Functions of cities to towns of
India 1961-1971, Delhi, 1981.*

Notes

1. E. Brutzkus, 'Centralized vs. Decentralized Patterns of Urbanization in Developing Countries : An Attempt of Elucidate a Guideline Principle', *Economic Development and Cultural Change*, 23(4), July, 1975.
2. See, for example, International Bank for Reconstruction and Development (I.B.R.D.), *The Task Ahead for the Cities of the Developing Countries*, (World Bank Staff Working Paper No. 209), Washington, 1975 p. 26, 32 to 34).
3. This view is expressed by among others, E. Brutzkus, op. cit. D.A. Rondinalli and K. Ruddle, *Urbanisation and Rural Development : A Spatial Policy for Equitable Growth*; 1978; National Council of Applied Economic Research, *Market Towns and Spatial Development in India*; Delhi, 1965; T.G. McGee, *The South-east Asian City* London, 1967.
4. Rakesh Mohan and Chandrasekhar Pant, 'Morphology of Urbanization in India : Some Results from 1981, *Economic and Political Weekly*, 17 (38-39), September, 1982, p. 1579.
5. Ibid.
6. For the definition of an urban area used in Census, see Census of India, 1971, *General Population Tables. Series 1(India) Part 2A(i)*), Statement 2, p. 42.

7. An urban agglomeration is constituted in the following circumstances : (i) a city with a continuous outgrowth (the part of outgrowth being outside statutory limits but falling within the boundaries of the adjoining village or villages); (ii) one town with a similar outgrowth or two or more adjoining towns with their outgrowths as in (i); and (iii) a city and one or more adjoining towns with their outgrowths all of which form a continuous spread.' *Census of India 1971*, op. cit., p. 3.
8. See Note 7.
9. Urban growth rate in a town size-class over a decade is computed as follows : towns are classified first into size-classes according to population in the initial year of the decade. For the towns in a size class in the initial year population totals in the initial and the terminal year of the decade are computed. The simple growth rate calculated from these two totals yields the size-class specific growth rate for the decade. This growth-rate calculation does not take into account the new town population. However, to compute 1971-81 growth rates population of 'out-growth' has been taken into account. For detailed discussion on problems and methodology of computing size-class specific urban growth rates from Census data, see A. Kundu, : "Theories of City Size Distribution and Indian Urban Structure", *Economic and Political Weekly* 8 (31) July, 1982, pp. 1361-1368. Also, R. Mohan and C. Pant, *op. cit.*
10. R. Mohan and C. Pant, *op. cit.*, p. 1538.
11. Calcutta city refers to Calcutta Municipal Corporation area only.
12. See, for example, K. C. Zacharia, *Migrants in Greater Bombay*, Bombay, 1968, pp. 113-115; V.K.R.V. Rao and P.B. Desai : *Greater Delhi—A Study in Urbanization 1940-57*, Delhi, 1960.
13. Alternative sources of natural growth estimates are : (a) Official Health Statistics (O.H.S.), (b) Sample Registration Scheme (S.R.S.), (c) Ideal Registration and Model Health Unit Project (I.R.M.P.), and (d) National Sample Survey (N.S.S.). O.H.S. provides estimates of birth and death rate. Both are supposed to be underestimates because of underreporting. Births are likely to be more under reported than deaths; the natural growth rate is, therefore, likely to be underestimated. To improve the quality of vital statistics S.R.S. and I.R.H.P. were introduced.

These schemes have their own limitations. N.S.S. estimates are available for a few years in the 1960s. Besides these are likely to be affected by seasonal factors. Estimates of the natural growth rate (person per thousand population per year) as available from different sources for rural and urban West Bengal show that in only one case does the rural growth rate exceed 25% (see Appendix).

14. A person, who was born in a place other than where he/she has been enumerated as resident, is considered a migrant. Such birth-place migration data provided in the Census of 1951, 1961 and 1971, are not comparable so far as rural-urban classification of the origin (birth place) is considered. The 1951 Census provides no such classification of the origin. In the 1961 Census the origin was classified into rural and urban area as was its status at 1961. In 1971 census the origin was classified into rural and urban area as was its status at the time of migration. This change would tend to raise the estimate of rural-urban migration in 1971 as compared to 1961. However, it would not affect the over-all stream of migration.
15. Traditional concept of employment (underlying any measure of employment) is not strictly equivalent to the concept of workers used in the Census. Because of sharing of available work, same amount of employment may be consistent with different number of workers.
16. See S. Sengupta and S. Bhattacharyya, 'Commutation in West Bengal, Findings of a Survey', in A. Mitra (ed) *Indian Population Bulletin No. 3*, 1966.
17. See A. Mitra, S.B.L. Sherry, and B. Dutta, *Shifts in the Functions of Cities and Towns of India, 1961-1971*. Delhi, 1981.

APPENDIX

Estimates of Natural Growth rate in West Bengal (persons per 1,000 population per year)

| Period | Source | Urban | Rural |
|-----------|----------|-------|-------|
| 1959 | S.R.S. | 11.0 | - |
| 1963-1967 | N.S.S. | 17.2 | 24.2 |
| 1971 | S.R.S. | 15.7 | 18.8 |
| 1970-1972 | S.R.S. | - | 17.7 |
| | I.R.H.P. | - | 27.0 |
| 1976-1978 | S.R.S. | 13.9 | 20.6 |
| | I.R.H.P. | - | 23.6 |
| 1979-1981 | S.R.S. | - | 23.6 |
| | I.R.H.P. | - | 23.8 |

Source : Government of West Bengal, *Economic Review* (different issues).

MIGRATION AND URBANIZATION-ISSUES RELATING TO WEST BENGAL

Biplab Dasgupta

I Introduction

The main objective of this paper is to analyse the process of migration in West Bengal, and its implications for rural-urban relationship.

We begin with a critical examination of the conventional theories of migration, particularly those popularized by Ravenstein, Lewis and Todaro, and also state an alternative approach for examining the phenomenon of population movement (Section II). This is followed by a brief historical outline of the migratory movements (Section III), and an analysis of the main trends based on the Census reports of 1961 and 1971 (Section IV). In Section V various components of the migrant population have been discussed, while in Section VI the factors relating to rural Bengal have been examined. Section VII looks into various impacts of migration on the rural and urban areas of the state. The policy issues and general conclusions have been outlined in Section VIII.

II Migration theories

Ever since Ravenstein propounded his several Laws of Migration in the 1880s, the main focus of attention in the proliferating literature on this field has been on the individual and his characteristics and motivations which promote migratory movements.¹ A large number of studies have attempted to establish age-gender and educational selectivity of migrants, and some have attempted to identify the migrants in terms of their social (caste, tribe, religion, etc.) and economic standing. While these studies have helped to illuminate the migratory process in specific situations and locations, these have failed to put forward a set of characteristics which are common to migrants everywhere. It is easy to find migrants who are rich, educated, high status, adult, and male as to find those who are poor, illiterate, of low social standing, minor and women.² No general conclusions on migrant characteristics have emerged because migration is a complex multi-variate phenomenon. Factors which promote rural-urban voluntary migration cannot be identical to migration induced by a communal riot or those influencing seasonal rural-rural migration. Different migration streams draw on

different sections of population. Hence the conclusions of a micro level study based on a particular location, time period and migration stream can not be generalized to other situations. Depending on whether a particular migratory movement is rural-rural, rural-urban, urban-rural, urban-urban, or temporary, seasonal, permanent, or target oriented; and voluntary, induced by disasters or organized by employers, the characteristics of individual migrants would vary. Not that studies on migrant characteristics are unimportant, these certainly help to provide useful information and add to our understanding of this complex phenomenon, but when interpreting their conclusions it is important to avoid the temptation of generalizing those to situations not covered by the specific study.

Implicit in this focus on migrant characteristics is a certain cause and effect relationship between those and migration propensity. A popular approach in explaining migration is to classify the explanatory factors into 'push' and 'pull' factors, the former indicating the degree of frustration of the individual with the rural life, and the latter a measure of response to opportunities in the city. Such classification can be helpful in an analysis of migration—when a person leaves place A to go to place B, his movement must be related in some ways to the conditions in A and the conditions in B. Those who are unhappy with terms like 'push' or 'pull' often find themselves more at ease with terms like 'village-based' and 'urban-related' factors. However, it might be argued that the push-pull approach, or its variants, illogically bifurcates the very concept of choice.³ A person moves not because in his judgement the conditions in the countryside are bad or because the conditions in the city are attractive; his decision is largely based on his understanding about the balance of opportunities in the two places.⁴ Migration is not a phenomenon which can be adequately studied or understood by examining it from the urban or rural end; a simultaneous approach which takes into account both the conditions in the origin and the destination at the same time is likely to be more fruitful.⁵

Todaro model

Analyses by Lewis,⁶ Sjaasted⁷ and Todaro⁸ among others are attempts to understand the phenomenon of migration in terms of rural-urban balance in income. According to the Lewis model, migration takes place because of the difference in wages between urban and rural areas, the differential measuring the differences in cost of living, costs of migration, and the psychic cost of adjustment to a new environment. The 'human capital' approach of Sjaasted

was an attempt to understand migration in terms of costs of migration and return from migration over a life time. The costs include transport, costs of food and shelter and other expenses during the initial period of unemployment in the destination, the income foregone in the origin, and the investment in training for the new jobs including on-the-job training. The returns include all the earnings from migration over the life time, discounted in order to obtain their present value. A person would migrate, according to this approach, if the return exceeds costs at present value. Such approach is exceedingly useful in explaining the age-selectivity in the migration process in favour of young adults in terms of declining return from migration for the elderly coupled with the increasing need to make a substantial investment in retraining. This approach would also explain why, following Ravenstein, migrants would tend to minimize distance, as it minimizes the costs of transport and also perhaps the monetary and psychic costs of adjustment to a new pattern of work and life style.

The Todaro model judged by the amount of writings and the research which have been stimulated to extend the model⁹ or to empirically test its validity—is by far the most popular model in the literature on migration. It allows for the existence of unemployment in the urban areas and takes account of the probability of finding a job in the organized sector in calculating 'expected urban wage'. The differential between the expected urban wage and rural wage, according to this model, is a powerful explanation of the migratory movement towards the urban areas.

A criticism of the Todaro model is that it unrealistically assumes homogeneity of skill and attitude of the potential migrants and that the latter have complete information on wages and the probability of finding an urban job. Another criticism is the neglect of non-economic factors in the decision to migrate, such as the psychic costs of adjustment to the new environment and the risks of failure. The model fails to account for the fact that migrants are not randomly distributed among those rural areas for which the differential between expected urban wage and rural wage is identical, or the role of contacts, friends, and relatives in urban areas in providing information, encouragement, financial support, and security in the initial period of employment.¹⁰ But perhaps the most serious criticism of models of Sjaasted and Todaro, and of Lewis, is that these tend to treat migratory process as an aggregation of numerous individual decisions, each motivated by the considerations of cost and return alone, and not as a product of changes in

social environment."¹¹

It can be argued that in the context of a majority of third world countries, it is not the individual but the family which makes the major decisions affecting the life of the individual, such as marriage, job, expenditure of family earnings, and migration. Several studies reveal migration decisions as a part of the family strategy to supplement agricultural earnings, diversify the income base, and minimize risk from disasters.¹² Family members often take their turn to migrate for a temporary period, and the practice of 'badli' or substitute labour (for example, in the jute mills of Calcutta) enables various members of the same family to rotate between agriculture and work in the factory. The individual migrant continues to be a part of the family in the village, returning there from time to time to take part in agriculture, sending remittances, and looking after family interests from the urban-end (litigations, education of the younger members in the town, purchase of agricultural inputs), and leaving the wife and children in the village.¹³ Some studies show a positive relationship between the family size and migration propensity—the larger families having both the need to diversify their earning opportunities and the means to finance migration.¹⁴ In many cases migration leads to the setting up of two establishments by the family—one in the town and the other in the village—with a regular flow of individuals between the two. In many cases individual migration of an adult male is followed by the migration of his brothers, wife, children, and other members of the extended family. In times of drought, civil war, riots, etc. often the entire family is forced to leave at the same time.

Migration decisions are often taken by units larger than individuals or households, e.g. the nomadic movements of *kuchis* of Afghanistan and of other pastoralists.¹⁵ In their case a group of families, or the tribe as a whole is involved in the decision-making. Here again, micro-level individual-based analysis would be of limited use. The nomads follow a time-tested route year after year in search of fodder for their animals.

Similarly, the Todaro model and other micro-models of migratory behaviour fail to explain some of the mightiest migratory movements of recent years, confined as it is in scope to rural-urban voluntary migration; for example rural-rural migration, migration-induced by disasters, and organized migration.

Rural-rural migration

In many cases rural-rural migration is temporary and seasonal; and involves people with little or no land who move from village to

village, either singly or in groups, helping with a variety of tasks such as ploughing, weeding and harvesting, as well as non-agricultural activities such as construction work. In many cases this type of migration is undertaken during off-season in the area of origin in order to supplement earnings, instead of being the main source of livelihood.¹⁶ However, poverty and hostile environment often force people to move out of their native villages in search of food, and work elsewhere.¹⁷ Other two types of rural-rural migration which are of permanent nature are : migration of wives to join their husbands, the qualitative significance of which is limited because of its near-random distribution over households and villages; and migration to rural resettlement schemes. Quantitatively, rural-rural migration dwarfs every other type of migration movement classified by origin-destination relationship; even in a country like Mexico with a very high level of urbanization more than 80% of migration remains confined to rural areas within the same region.¹⁸

Organized migration

Organized migration of slaves and indentured labourers to mines, plantations and factories is an important feature of the history of population movements. In most cases organized migration involved very long distances, often across national boundaries, and a very long time period for which the contract remained valid. Both the distance and the length of contract encouraged the migrants to take their families with them and to permanently settle down in their destination. The large Indian settlements of Sri Lanka, Malaysia and the Caribbean of today originated in this way.¹⁹ In recent years too, one can find many instances of organized migration; for example of skilled manpower like engineers and doctors from India to countries of Africa and the Middle East on the basis of inter-government agreement for fixed periods; and of unskilled personnel either to fast-growing small countries (e.g. the migration of Pakistanis to Gulf countries) or to developed countries as 'guest workers' (of Turks to West Germany).²⁰ A major difference between organized migration of today and of the past is that whereas in the earlier ones the whole family migrated on a permanent basis, the present day tendency is for the guest workers to leave their family behind and to stay in the destination only for a fixed time period. In fact the guest workers are not encouraged by the host country to bring their families, and they are often the first to be dismissed in times of industrial recession.

Disaster-induced migration

Disasters can be classified into natural, economic, and political

ones.²¹ Examples of the first are floods, cyclones, earthquakes, volcanic eruptions; attack by pests, drought, and famine are examples of economic disaster, while political-social disasters are caused by conflicts between various social groups which are divided on linguistic, communal, or ideological lines. The flow of migration caused by such disasters is unpredictable, discrete, and often on a large scale. Some of the natural-economic disasters—like cyclones and floods—establish a certain regularity over a long time span, but it is not easy to pinpoint their exact timing or location. Such disasters force people to leave their home for food, shelter, and security; and a good proportion of them move towards the bigger cities which are seats of power, where relief is better organized and immediate attention can be received. Besides, the bigger urban centres are often better connected by road and rail than nearby village and smaller urban areas, and are better known to the victims of such disaster, another explanation why people move to the bigger urban centres. Many of the victims of disasters eventually return to their villages, but many others stay on, particularly the political refugees. A great proportion of the poorer families who migrated to Calcutta during the Great Bengal Famine of 1943 found difficulties in socially adjusting to the their native villages—some of whom were socially alienated because they resorted to begging—and instead chose to stay in the city and swell the ranks of its pavement dwellers, beggars and members of the 'informal sector'.²²

In all these examples, movement of slaves, and indentured labourers, organized migration on long term contract, disaster-induced migration, and rural-rural migration, the individual actor is not acting autonomously, based on his own subjective estimation of the balance of opportunities, but is operating as a part of a social-economic process which covers many individuals, and is a product of history. This very important aspect of the phenomenon is missing from the Todaro type analysis.

Approach of this paper

To summarize, our main objections to these neo-classical theories are as follows :

(a) These are ahistorical, and do not take into account the fact that each migratory movement has a history behind it. The patterns and trends in migratory movement cannot be understood without reference to this historical background which explains a particular origin-destination relationship.

(b) These see migration as a simple aggregation of numerous individual decisions, each of which is influenced by considerations

of costs and returns, and also assume that each potential migrant possesses complete information necessary to make such choices regarding migration, direction of migration and behaviour in the destination. We take the view that migration is a complex, multi-dimensional phenomenon and such individual decisions play a minor role in relation to the overall magnitude and direction of the migratory movements.

(c) These theories tend to emphasize on one particular migration stream—rural to urban movement—to the exclusion of other, often quantitatively more important, migratory movements such as rural-rural migration, or those induced by disasters or organized by the employers themselves.

(d) While economic factors undoubtedly play an important role in migration decisions, these theories tend to overemphasize on those while ignoring the role of urban contacts and various social and cultural factors which explain large scale migration from certain regions.

(e) These theories also view migration in isolation from other options of labour use from the point of view of the potential migrant, such as working on family farm, hiring out labour to other land owners, and participating in non-land activities within the village.

(f) These theories ignore the role of the state in promoting or hindering population movements within the country or across the international border, as also as an important influence over the agrarian structure and settlement pattern.

In this paper we have tried to rectify those errors of the neo-classicists (a) by tracing the historical roots of the major migratory movements, (b) by relating the migratory movements to broader economic and social events and issues, (c) by reference to the other forms of labour use from the point of view of the prospective rural migrants, (d) by taking account of the non-economic factors which influence such movements along with the major economic factors, (e) by considering rural-urban migration in comparison with other types of origin-destination relationships, and (f) by considering the role of the state as a major influence on such movements.

In this paper migration is viewed as resulting from two major changes in social-economic environment : changes in the agrarian structure and changes in the settlement pattern. Therefore, a brief analysis of the agrarian structure in rural Bengal has been added, along with a brief account of the rural-urban settlement pattern.

III Migratory movements : historical background

The pre-independence historical background to the migratory

movements in West Bengal has been provided by another paper of the author.²³ Here it will be sufficient to note that most of the major migratory movements of today have their origin in the economic and administrative policies pursued by the British rulers of India. Until 1757 migratory movements were rare and mostly covered short distances, and were primarily linked with pilgrimage, army movements and trading. The villages were largely self-sufficient, and their population were tied to land and the village economy by an elaborate division of labour based on the caste system.²⁴ Bad communications also hindered large scale migration from the villages.

The colonial state encouraged organized migratory movements towards jute factories, coal mines, tea plantations and overseas markets, encouraged the contractors to bring labourers from distant areas to work for railways and road construction and to perform a variety of services for the growing urban population and also to undertake large-scale clearing of forests. Such movements were facilitated by the disintegration of the rural industries, the increasing stratification of the peasantry which led to landlessness, and the development of rail-road network.²⁵ At the same time, a large section of the middle class were induced to undertake a variety of jobs associated with administration in the districts of West Bengal. The role of the state cannot therefore be overlooked when considering migratory movements in this state.²⁶

Apart from the role of the colonial state in engineering, organizing or promoting migration, directly or indirectly, disasters of various sorts have always played an important role in influencing large-scale migratory movements.²⁷ These factors continue to influence migratory movements today, though with varying intensity.

Calamities

Coming to natural calamities, the two major factors inducing migratory movement from the rural areas to the urban centres are floods and droughts. With so many rivers flowing into the sea from different directions, some covering a distance of more than one thousand miles, and with more than 78% of the rainfall occurring over four months between June and September, it is almost inevitable that once in a few years a major flood would affect one part of the state or another. Extensive deforestation of the catchment area, silting of river beds, and the inefficiencies in the water

management and flood protection systems are some of the contributory causes for the periodic occurrence of flood in this state. The floods wash away many villages, destroy mud huts, and cause extensive damage to crops; and their victims—homeless and dispossessed of everything—are often left with no choice but to move towards the nearest urban centre. Similarly, given the critical dependence of the state's backward agriculture on the vagaries of nature, it is inevitable that once in every three or four years there would be a failure of crops. In both of these two types of cases, the poor farmers and landless labourers, with little land, money or assets to fall back upon, are compelled to leave the villages for the towns or cities, the centre of power where they would be more likely to be noticed and helped. Ever since the independence of the country, there has been several such movements, generally towards the metropolitan city, particularly in the following years : 1952, 1958, 1959, 1966.

The impact of such natural calamities often became very severe due to the intervention of human beings. We have already referred to the human factor in the occurrence and intensity of floods; but even in cases of droughts the food scarcity is often magnified by the hoarders. The 1943 famine of Bengal was largely due to the seizure of country boats—the main means of transport of grains in East Bengal—by the British Government as a military preventive measure against the advancing Japanese army.

Many of the beggars and pavement dwellers of the city of Calcutta whose number has been variously estimated as between 30,000 and 100,000—came to the city during famine or acute food scarcity in the villages. Some of them visit their native villages occasionally, particularly during harvest time to work as labourers, and some of them even own small plots of land which are leased out to relatives; but the great majority of them find it difficult to maintain social relations with their relatives and erstwhile friends because of the stigma attached to begging.²⁸ Not all the pavement dwellers are beggars, some of them are porters and vendors who do not have any place to sleep; and conversely, not all the beggars live on the pavements, many of them live in slums, temples, vagrant homes, and occasionally, in hospitals. Many beggars combine begging with part-time work, like car-minding.

Unlike the refugee movement or the migration generated by the political factors which first push out those who are better off and with contacts at the destination, the natural disasters produce an

opposite tendency of inducing the poorer sections, who become the hardest hit and are often left with no alternative, but to migrate. But in both of these two types of migratory movements the people generally move in family units.

Riots between the two major communities were an important, though unfortunate factor in the social life in the state until the early fifties; and each of these riots made its contribution towards forced movement of people into safer areas and towards communal segregation of population. The biggest of the riots took place during 1946-47, on the eve of India's independence, but since then there had been only two major riots in 1950 and 1964. Generally speaking, West Bengal's record in this field is perhaps the best among the states over the last three decades, and is due in no small measure to the emergence of the secular, left-wing parties as a dominant political force. The riot of 1964 took place at a time when the left-wing forces were passing through a period of temporary eclipse following the 1962 border war between India and China and the massive arrests of their leaders.

Coming to migration induced by social disasters, unlike the other types, these movements are usually individually-based and are often in the nature of system-avoidance migration. A survey of beggars in Calcutta revealed that a good proportion of them left their villages after being excommunicated for socially unacceptable behaviour. Many of them are women who have been deserted by their husbands or lovers.²⁹ A survey on 10,000 prostitutes of the city of Calcutta showed that many of them joined the brothels after being deserted by their lovers who brought them from the villages. However, a great majority of the prostitutes join the profession because of economic reasons.³⁰

Refugees

One of the major population movements in West Bengal in recent years has been the refugee inflow from the neighbouring Bangladesh, which began in 1946, on the eve of the independence and continued until the early seventies during the emergence of Bangladesh as an independent state.

Out of those who came, about three-fifths came within four years of the independence of the country.³¹ These figures exclude the colossal migratory movement of 10 million refugees in 1971, at the time of Bangladesh liberation struggle, practically all of whom returned to their native place soon after the creation of Bangladesh. Illegal, unrecorded migration takes place continuously across the

border; in fact such migration into neighbouring Assam has recently become an explosive political issue in that state.

It is possible to detect a pattern in the year to year flow of refugees. The first to come were the more educated, economically advanced, and higher caste groups, who had relatives, friends, or other contacts in their destinations. The group preferred to stay in and around Calcutta where their relatives lived and where they were more likely to find jobs suited to their qualifications and aspirations.³² According to surveys conducted in the mid-fifties, about 84% of those living in the 149 refugee squatter colonies in Calcutta were literate, a very high figure indeed, and only 6% of the earners among them took up any kind of manual job, skilled or unskilled.³³ Those who came in the latter years were people with virtually no previous contact with West Bengal, and who had more to lose and less to gain from migration—those belonging to the lower castes, illiterate or semi-literate, and with a rural-agricultural background. They were more willing to move to refugee camps outside Calcutta, and to undertake cultivation when land was made available to them. In some districts, particularly Nadia and 24-Parganas, they played a pioneering role in clearing forests, extending the area of cultivation, and introducing new crops—jute and mesta, the latter a substitute of jute.

Attempts were made to settle many of the refugees outside the state in Andaman Islands in the Bay of Bengals, Dandakaranya, a forest area covering lands of Andhra, Madhya Pradesh, and Orissa, and several camps in other states of India, but the experience was highly disappointing. Desertion was common, and refugees returned to West Bengal when the conditions in the settlement areas became unbearable or when their hopes were roused by some of their leaders about the possibility of a permanent resettlement in West Bengal itself.³⁴ Even as late as in 1978 a group of 100,000 refugees from Dandakaranya arrived in West Bengal, following the accession to power by the left-wing government, and stayed on for several months before they could be persuaded to return to Dandakaranya.³⁵

There were several reasons for the failure of the resettlement programme. A major reason was the lack of development of infrastructure, such as road, hospital, market, schools, or of employment opportunities. A frequent complaint was about the lack of sympathy or organizational skill on the part of the administrators responsible for the resettlement programmes. In several places there were complaints about the repressive and high-handed manner.

including police firing on refugees in two places, in which their legitimate grievances were handled. Very often land given to the refugees was unsuitable for cultivation, and not much administrative help was forthcoming for forest clearance. Perhaps the most serious obstacle was the lack of communication with the local population who looked upon the refugees as intruders in their ancestral land, and as being responsible for high prices, scarcity of commodities, and competition in the job market. All these factors, plus the desire of the refugees to stay in West Bengal were cited as reasons, by a committee of ministers in 1954, in support of their contention that, 'experience has shown that large scale rehabilitation of East Bengal refugees in these (i.e. other) states is not possible, and we do not think the question should be further pursued.'³⁶

As studies on various regions and towns of West Bengal show, the refugee inflow has been a major factor in post-independence urbanization, particularly in Calcutta, Siliguri and other north Bengal towns in the plains, and all the areas along the border with Bangladesh, particularly in Nadia and 24-Parganas. This sudden influx, and the resulting pressure on the limited civic infrastructure, is one of the main causes of the deterioration in the standard of urban life in West Bengal in the post-independence period.

Organized migration

There were four major types of organized migration in West Bengal in the past: the first three to the newly growing centres of economic activity such as the jute industry along the river Hooghly in and around Calcutta, tea gardens of Darjeeling and Jalpaiguri in the north, and the mining areas of Asansol; but the last one involved export of Indian labour through a recruitment centre in Calcutta to various countries of the world, mainly the West Indies.³⁷ There were usually two major objectives behind such recruitment: one, to satisfy the labour need when for some reason or the other the local population was not coming forward to work in those industries and two, to secure a docile and disciplined labour force which had no social or economic root in the area, and which for this reason was totally dependent on the management. Whereas the local labourers were tied to local land, and occasionally took time off to work in those lands, and a high level of turnover and absenteeism characterized such a labour force, the immigrant labour was relatively stable and more compliant. The source of immigrant labour varied between industrial units and tea gardens but the two major sources were tribals from Santal Parganas and Chota Nagpur and the poor

and marginal farmers who were pushed out of their land in the northern part of India, particularly Bihar and Uttar Pradesh.³⁸ In some cases, the immigrant labourers were encouraged to bring their families with them, by offering them accommodation and some land, both in order to make the labour force stable, and to use the women and children as well as labourers with a low wage. Women labour comprised between a third and two-fifths of the labour force both in the tea plantations and the coal mines only two or three decades ago.³⁹ In practically all these cases, the labourers were offered an advance to cover their travelling expenses, and the employment was governed by a fixed duration contract which did not allow for withdrawal from employment.

By the fifties all these methods of recruitment lost their importance and virtually disappeared, mainly because of the following two reasons : the transformation in the demand-supply situation in the local labour market, which now made it unnecessary for the management to recruit immigrant labour; and the emergence of a stable labour force divorced from land and adapted to the work environment of mines, industries, and plantations for generations.

IV Migration trends : 1961-1971, based on Census Data

The growth of towns over the past two hundred years is due to both migration and natural growth. The larger the town/city the greater is the proportion of migrants in it, as a general rule, and the greater is the diversification of the population in terms of ethnic-linguistic-religious composition. Over the years, as the migrants permanently settle down in the cities, more and more of those who had come from outside become a part of the local population, and their offsprings are treated as local people by the Census authorities.

Female migration and gender ratio

A significant proportion of the total population of the state were not born in the place where they were residing at the time of the Census : 37% in 1961 and 31% in 1971. But the majority of them were women who migrated to join their husbands after marriage, and the vast majority of them moved within the district of their birth. In 1961 three-fifths of the migrants were women, and in 1971 they constituted 58% of the migrants, although their proportion in the total population was no more than 47%. More than three-quarters of the migrating women moved to rural areas; and among the rural population, while only 15% of men moved out of their birthplace according to the 1971 Census the corresponding figure for women was 39%. (Table I)

This type of migratory movement, despite its numerical weightage, is not usually very important. Taking any particular rural area into account, what this involves is no more than an outward movement of women to other rural areas, and an almost evenly matched inward movement of women from other rural areas, who would be doing practically the same set of jobs—as housewives and as participants in agriculture and handicrafts—which the other set would have done had they remained in the village in place of the immigrating women.

However, female migration is not always without interesting features. In case of migrating males it is important to know whether they bring their families with them to the destination; this is indicative of their long-term intentions, the nature of their ties with their birthplace, and the expected duration of migration. Where migration involves the entire family, the age-gender structure of the destination remains unaffected; but where it is gender-selective, depending on the size of migration, it influences the over all age-gender structure of the area. Urban areas draw more migrants as a proportion of their population size than the rural settlements and as a consequence, given the gender-selectivity of migration movements, it affects the proportion of women in the population. According to the 1971 Census, the number of females per 1000 males in towns of West Bengal is a small 755, and the figure monotonically declines with the size of the town; 881 for towns with more than 20,000 people but less than 50,000, 871 for those with between 50,000 and 100,000 people, and 709 for towns with more than 100,000 people. In the case of Calcutta the figure is a very low 638, and that for the twin city Howrah, 682.

The larger the urban settlement the greater is the likelihood of its attracting migrants from other states of India and other countries, a majority of whom leave their families behind. More than four-fifths of the inter-state migrants come from three states—Orissa, Uttar Pradesh and Bihar, and in their case the numbers of females per 1000 males are 299, 315 and 424, respectively.⁴⁰ As we shall see later, many of them periodically return to their native villages, and permanently return home after their working life is over. In contrast, the proportion of females among the refugees from erstwhile East Pakistan is very high, about 835 per 1,000 males, which is indicative of their intention to permanently settle down in West Bengal.⁴¹ The victims of riots, flood, and drought, generally tend to move with the entire family. In the case of intra-state male migration, very often the

adult male initially leaves the family behind, but after a time interval, having established himself in the destination, the wives and children are brought over.

Generally speaking, the migration of women is not associated with their own job prospects. But there are some notable exceptions. A great deal of 'organized migration' to mines and plantations in the past were prompted by the offer of jobs to both men and women. About 38% of women were involved in inter-state migration for work, a third of them in mining and quarries, and another substantial proportion in plantations, while it is not uncommon to find tribal women from Chota Nagpur working in the fields doing transplanting in Burdwan and Birbhum, as agricultural labourers. Migrating women from some districts of West Bengal—notably Midnapore—and belonging to marginal farmer and agricultural labourer households, mostly widows and their children, are known to constitute a significant proportion of 'domestic servants' in Calcutta; in fact this occupation accounts for more female workers than any other in that city.

Origin and destination of migratory movements

Concentrating on male migrants alone, let us examine where they come from and where they go to. The origin-destination matrices for 1961 and 1971 divide the destinations into two broad categories—urban and rural; and the origin into four—within the district, outside the district but within the state, outside the state, and outside the country—leaving aside those whose origins are unspecified. It is clear from Table 4, that between 1961 and 1971, intra-state migration has increased at the cost of inter-state and inter-country migration, while the number of migrants has remained more or less the same.

As for inter-country migration, which accounted for about a quarter of the total number of migrants (24.98%) in 1961, all but a few came from erstwhile East Pakistan (presently Bangladesh)—as refugees, and neighbouring Nepal, the former accounting for 23.63% and the latter 1.30% of the total migrants. The flow of migration from both of these sources has virtually stagnated over the past two decades, ignoring the large scale temporary migration on the eve of the liberation of Bangladesh. The decline in the refugee population could have been due to transfer to refugee camps and settlements outside the state, and to natural wastage. As for inter-state migration, in the past the three major areas of their migration were the jute industry and urban areas in and around Calcutta, the mining areas of Asansol, and the tea plantations of North Bengal

which is also the main destination of the Nepalese migrants. In their case the main reason for the decline in number could be the contracting job opportunities and competition with the local unemployed, as well as retirement and death of the older migrants. Although male migrants from outside the state and the country still account for a majority of all male migrants, during 1961-71 the intra-state migrants registered an impressive 10% increase among the male migrants.

Coming to the rural-urban division of the destination of migrants, historically, the tendency was for the migrants to move towards the urban areas. In 1961 more than half the total population in urban areas were migrants (Table 3). This was particularly true in the case of the inter-state male migrants, three-quarters of whom, even as late as in 1961, preferred urban areas to the rural ones. Taking the three major areas of such inter-state immigration, in 1961 about 87% of those from Uttar Pradesh lived in urban areas, the corresponding figures for those from Orissa and Bihar being 70% and 61%. Generally speaking, the longer the distance travelled, the greater is the probability of the migrants moving into urban areas, particularly the bigger urban areas, and of the migration being initially prompted by the organized recruitment by employers, as was the case with the jute industry around Calcutta and mining areas of Burdwan. A high proportion of those migrants from Bihar who moved into the rural areas of West Bengal were presumably those from the neighbouring districts. However, over time, the importance of the urban areas as destination is declining. In 1971 the proportion of migrants moving to urban areas decreased to 45%, compared to 52% in 1961; and the inter-state migrants suffered an 18% decline in number between the two Census years. Whereas in 1961 the proportion of urban-based inter-state migrants was as high as 74%, by 1971 it became 67%, a 7% decline (Table 4). In the case of those from outside (the overwhelming majority of them being refugees from East Pakistan, as we have already noted), the proportion of those living in urban areas among them registered a sharp decline from 52% in 1961 to 42% in 1971. Only in the case of intra-state migration does one find a slight 2% increase in the number residing in urban areas, but here too the proportion of urban migrants among all intra-state male migrants has declined from 36% in 1961 to 33% in 1971 (Table 4).

Taking all types of male migration into account, the period between the censuses witnessed a major 7% shift in the balance between the urban and the rural sector. Since the total number of

male migrants remained virtually the same in the two census years, this implied that the decrease in the number of male migrants in urban areas was evenly matched by their increase in the rural areas.

What explains this shift ? To understand this, perhaps we ought to decompose migration into its four components in terms of origin-destination relationship. Taking rural-urban migration first, its diminishing importance appears to be largely due to the following three factors :

(a) a decline in the urban-based population of refugees, with no fresh inflow from Bangladesh and with its existing population subject to natural decay. The offsprings of refugees are not classified as 'migrants';

(b) a decline in the population of inter-state migrants, a great majority of whom choose the urban areas as their destination (Table 2). This could be due to shrinking job-opportunities in the towns, which induce a part of the circular migrants not to return from their native states; and

(c) shrinking job-opportunities in the urban areas also discourage would-be-migrants from rural areas within the state; some of whom now find job opportunities in other rural areas more attractive.

Coming to rural-rural migration, two major reasons for the significant increase in its importance appear to be as follows :

(a) improvement in transport and communications. Whereas in the past transport networks were oriented towards travel to and from big urban centres, these are now more widely spread, and both road and rail services have considerably improved. In fact, the improvement of the transport system is one of the major achievements of the post-independence period in this state. As a consequence, whereas in the past people in the villages knew more about Calcutta than about the neighbouring villages, now there is much wider knowledge about other areas in the same district and the neighbouring districts; and

(b) widening intra-rural inequality. This is happening because of two opposite developments—the increasing landlessness and 'pauperization' in poorly endowed areas, e.g. those in the districts of Bankura, Purulia, and Midnapore, and the increased labour demand in areas with high crop intensity and a relatively successful implementation of the new agrarian technology. Many of those who are migrating into the richer agricultural areas from the depressed areas of the state had contacts with their destination over a long

period or time as seasonal migrants. Over time more and more of them are becoming permanently settled.

Most of those migrants are moving within the district and over short distances, unlike the usual long distance inter-state rural-urban migration. Some of the rural-rural migrants come from neighbouring states and countries, but their proportion is small and declining (Table 2).

Urban-rural movements are not quantitatively important, and these usually are of the following four types :

(a) dispersal of refugees. For many of the refugees from East Pakistan, Calcutta was the first destination in West Bengal, largely because of its better rail-road connections and importance. But over time, during the fifties and early sixties, a good majority of them were transferred to rural areas. This type of movement is no longer important;

(b) return migration. Many of the migrants from rural areas return to their villages at the end of their working life, or at the end of their period of contract for work. There are also those returned migrants who originally came to the town with a 'target'—of savings, education or experience—and return when such target has been accomplished. Then there are those who come to think that their experience and ability could be more fruitfully employed in the rural areas—in agriculture, business, or politics—and so return home with whatever savings or qualifications they have accumulated during their stay in the towns. Lastly, there are those unfortunate ones who return because they have failed to find employment, or have otherwise failed to adjust themselves to the urban life;

(c) return migration of victims of natural disasters. Many of those who come to the urban areas during years of drought, or flood return as soon as the conditions in their native villages return to normal; but many stay on, and many return after some years of stay in the urban areas; and

(d) migration of the urban middle class. These are mostly those in teaching, government, banks, etc., qualified urban-based individuals from middle class backgrounds who often move from one rural area to another in connection with their job.

Lastly, urban-urban migration. Such movements are normally inter-district and inter-state. These usually take either of the two following forms : first, 'step migration' from smaller to bigger urban settlements and, secondly, in the reverse direction, particularly for work in the schools, colleges, hospitals, government services and

business in districts away from Calcutta. This second type of migration is often of a temporary kind, and involves young job seekers without experience, who begin their career in a smaller urban settlement but gradually, with age, experience and standing, move back to the bigger settlements. The development of new townships—e.g. Durgapore, Haldia, Kalyani—and industries in smaller urban settlements (e.g. Asansol, Farakka and Kolaghat)—is an important factor in this type of migratory movement.

The overall shift in the movement in favour of the rural sector measures the aggregate of changes in these four separate types of migratory movement. It is clear that rural-rural migration has emerged as the major type of population movement, and as one with increasing share of the total migrants over time, while the weight of rural-urban migration is declining. This shift is important for yet another reason. Given that the number of people living in the countryside is three times the number living in urban areas, the same number of migrants would make much less impact in the rural areas than in the urban ones.

Taking male migrants into account, and making calculations on the basis of figures given in Tables 5–6 we find that between 1961 and 1971 the proportion of migrants in the population declined by about 6.2% (from 29.7% to 23.5%), but the decline was unevenly spread between the two sectors—the urban sector registering a 17.2% decline (from 56.7% to 39.5%), compared to a mere 2% decline in the rural sector (from 19.7% to 17.7%).

V Components of migrant population

Coming now to 'voluntary' migration, these can be broadly divided into two types : migration from other states to the urban centres, particularly to Calcutta; and the movement of people within West Bengal; within the rural sector from one village to another, rural-urban migration, step migration from smaller to larger urban centres, and some reverse migration from the urban to the rural areas. In between the two there is a third type, the seasonal migration of rural labour across the state border to villages in West Bengal.

Inter-state migrants

Migrants from other States constitute a significant proportion of the population in the main urban centres, particularly in Calcutta, Howrah, Hooghly, 24-Parganas and Burdwan. In the Calcutta city they constitute 42% of the total population and occupy the two extreme ends of the income and occupation scale. At the top end are Marwari (and some Punjabi and Gujrati) businessmen, who origi-

nally came from the semi-arid areas of western India. Many of them came with no more than 'a brass drinking pot, tattered clothes, and a stick' as their possessions, began their work in a small way in Burrabazar, the major marketing centre of the city, or in the textile business around the city, specialized in the wholesale trade in imported cloth and spices, undertook brokerage for the British firms, and combined all these activities with their traditional calling as money-lenders. But very soon, through skill, hard work, and willingness to take risks, as well as mutual support for one another, they managed to reach the top of the business ladder in the state.⁴³

At the lower end are the Hindustanis from Uttar Pradesh, Bihar, and Orissa, who are mainly engaged in the informal sector or manual work in the factories. Oriyas specialize in cooking, work in docks, and as domestic servants and gardeners. A good proportion of them is also engaged by the Calcutta Corporation. They were originally recruited from two districts of Orissa—Baleswar and Cuttack—for work as palanquin bearers, but then moved into other occupations when palanquins ceased to be used by the rich as a mode of transport.⁴⁴ Hindustanis were originally recruited to operate horse-drawn carriages, but now they are engaged in other kinds of transport operation—trams, rickshaws, and handcarts and in various other manual jobs, such as porters, watchmen, domestic servants and cobblers, in addition to taking part in the informal sector. Among the other groups, Punjabis specialize in running garages, buses and taxis, and in mechanical work of different sorts, while a majority of south Indians (excepting for the dock workers from Andhra) specialize in clerical or administrative work.

Many of the immigrants from the other states work in the large informal sector of the city which accounts for between two-fifths and a half of the earners. While the proportion of immigrants in the workforce in Calcutta is only 46.7%, the corresponding figure for the informal sector is 58.8%.⁴⁵ In some occupations the immigrants exceeds 60% : for example domestic service (60.9%), rickshaw-pullers and porters (95.5%), and unspecified occupations (71.3%). Their earnings are extremely low. According to one survey undertaken in 1956, while the average monthly income of a clerk was Rs. 110, and that of an engineering operative Rs. 103, a rickshaw-puller got Rs. 59, a domestic servant Rs. 46, a manual handicraft worker Rs. 65, and a retail trader Rs. 70. Besides, these earnings were unstable, widely fluctuating between seasons, and declining in real terms with increased competition from new entrants to the informal sector.⁴⁶

One obvious question is : Why do the immigrants continue to come to Calcutta when employment conditions are obviously bad ? The simple answer is that even the low, irregular earnings in the city's informal sector are higher and more regular than their earnings in the native villages. One survey found that more than 80% of the immigrants gave landlessness and unemployment in their native villages and prospects for better jobs in Calcutta as reasons for coming to the city.⁴⁷ The incidence of open unemployment is much less pronounced among the immigrants; for example, one survey found that while 26% of the refugees and 16% of the local residents were unemployed, the figure for the immigrants from other states was only 8%.⁴⁸ The explanation for this could be the tendency for the latter to take jobs in the elastic informal sector rather than 'wait' for a better job. The unsuccessful immigrants return home as soon as their savings get exhausted, while the local population and the refugees, with the support of the family behind them, are able to survive as unemployed for a longer period. The decline in inter-state migration between 1961 and 1971 can be explained by the shrinking job-opportunities in the formal sector, and increased competition from the local job-seekers in the informal sector.

Considering the size of inter-state migration, it is remarkable that a great majority of them come from a small number of districts, areas with which early contact was established during organized migration to the industries; where people are aware of the job opportunities in the destination, and whose people can rely on members of extended families or friends already living in that destination for help in finding job and accommodation and credit in the initial period.

Such migration is strongly age-gender selective, consisting mainly of the adult males who leave their families behind, maintain a bare minimum existence and remit a part of their earnings (Rs. 400 million per year according to one estimate in the early sixties) to their native villages.⁴⁹ Sometimes a group of 10-20 of them communally rent one or two rooms, where they dump all their belongings while sleeping outside in the open. Many of the domestic servants are allowed to sleep in the houses of their employers; the porters and peons usually sleep in the office buildings where they work and those who own or work in shops usually sleep on the premises. One survey revealed that 22% of the Hindustanis lived in shop-dwellings, 28% in joint houses, and 47% in mud-built houses, while only 2% enjoyed the luxury of separate brick-built accom-

modation, in Calcutta.⁵⁰ The segregated living, job specialization, the existence of separate schools, separate social and religious institutions for different linguistic groups, and the feeling among them that their stay in this state is temporary, all these factors largely account for the lack of close social integration between them and the local population.

Bengali migrants

Coming to migration among the Bengalis, rural-rural migration is quite significant, and is becoming increasingly more important (see Tables 2 and 4). Leaving aside migration linked with marriage, there is considerable migration of agricultural labourers who move seasonally for work during transplantation and harvesting time. Such migration tends to bring people from backward areas with a low demand for agricultural work to areas with more advanced agriculture and higher cropping intensity, for example, migration from Bankura or the districts of north Bengal to Burdwan or Hooghly. Another type of rural-rural migration involves rural labourers from across the state border—the tribals from Chota Nagpur plateau—who are known for their skill in transplantation of rice. There is no quantitative study of these migratory movements, but it is clear from interviews conducted in several districts that the number involved is quite substantial. The tribal seasonal migrants are often preferred to the local labourers because they are more docile and ready to accept their wages. In many instances the tribal workers from Bihar are sought and brought over by the landowning interests as a counter measure against the movement of the rural labourers for higher wages.⁵¹

Rural-urban migration flow is traditionally dominated by the more educationally advanced and economically better-off sections of the rural population. The 1911 Census of India revealed that a significant proportion of the Bengali immigrants to the city of Calcutta belonged to the top three castes (Brahmins-Baidyas-Kayasthas) : out of 31,376 who came from Howrah 14,707 belonged to these castes, and for Hooghly and 24 Parganas the figures were 9,250 and 4,598 and 51,069 and 26,507, respectively.⁵² Among the rest a large proportion came from the 'middle castes', and very few belonged to the lower castes. According to the 1931 Census, 40% of the Hindus in Calcutta belonged to these castes.⁵³ Even a recent study in the early 1970s in a slum of south Calcutta with a large population of recent migrants, showed that while the upper castes were well represented the percentage of scheduled castes was very

low. The majority of the families in the slum came from the intermediate castes.⁵⁴ Given the close correspondence between caste-class hierarchy, these figures clearly show that it was not necessarily the poor or the disadvantaged in the village who migrated.

A great deal of migration takes place from villages to adjoining urban centres; and sometimes from there, by steps, to larger urban centres and cities. There is not much data on these movements, but enough of circumstantial evidence which point to migration to such small urban centres from all sections of rural population. Maintenance of two establishments—one in the town and one in the village—is typical of many better-off households in Bengal. 'Student migration' is quite high, given the absence of adequate facilities for higher education in the villages. A majority of students in seven big colleges of Calcutta come from outside Calcutta; the large number of 'student mess' and 'boarding houses' in the city cater to their needs.

Rural-urban migration from the poorer end of the rural population mainly satisfies the demand for domestic servants in richer households. A great majority of them come from the large Midnapore district, some seasonally but many permanently. The very low wages of these domestic servants have made it possible for even the lower middle class families to have at least part-time help. Their presence is also reflected in the settlement pattern in the cities, where a cluster of brick-built houses is surrounded by slums where the poorer sections serving their needs live.

In the recent past there were two major instances of urban-rural migration : one, during the Second World War when many families left Calcutta and other urban centres for fear of bomb attack; and secondly, the dispersal and resettlement of refugees in the countryside from their concentration in urban areas—a point which has already been noted.

Inter-state outmigration

In our discussion on inter-state migration we confined ourselves to immigration into West Bengal from other states of India; and the outmigration of Bengalis was discussed only with reference to intra-state movements. It is important to add a few words about inter-state outmigration from West Bengal in order to complete the picture.

Table 9 provides some idea about the scale of such population movements; 602,700 in 1961, and 766,900 in 1971. These figures constitute 27% and 40% of these for inter-state immigration

respectively, for these two years. These are substantial figures, constituting 1.7% of the total population in 1971; but more important, between 1961 and 1971 the outmigration figures registered a 27% increase, and over time, their relative importance *vis-a-vis* inter-state immigration is growing.

Another interesting feature of this Table is the very high proportion of women among the outmigrants—54.4% in 1961 and 56.8% in 1971, which are more in line with the general pattern of migration in West Bengal than with the figures for inter-state immigration. Furthermore, the proportion of women among outmigrants coming from the rural areas is higher than that from the urban areas—in terms of per thousand males, the figures are 1,533 and 1,077, for rural and urban areas respectively in 1971; the comparable figures for 1961 being 1,336 and 976. These figures provide strong indication that inter-state outmigrants from West Bengal are more likely to take their family with them to the destination than those coming from other states to West Bengal. But these figures are too high to be explained away in terms of marriage-linked migration alone. Could this be they are mostly 'return migrants', who originally came from other states ?

It is a pity that so little is known about those involved in these movements, their age, occupation at the origin and destination, the factors prompting their decision to migrate, the nature of their migration (whether temporary or permanent), their destination, and their ties with West Bengal in terms of remittance, social relations, and so on. Much of this information is available from the census organization but it would require to be processed before meaningful answers to these questions are obtained. This is certainly one of the priority areas of further research on migration in West Bengal, along with a district-wise analysis of the migratory movements within West Bengal.

VI Agrarian structure and other rural issues

The agrarian factors promoting migration may be classified into the following groups for the convenience of discussion : (a) those relating to low-land/man-ratio, and the increasing marginalization of the peasantry, (b) those relating to the concentration of land and their implications and (c) those concerned with the impact of the new technology of agricultural production associated with the high yielding seed varieties.

As for (a) certain areas with a low cultivated-land-man-ratio or with low-land productivity have been traditionally outmigrating areas, e.g. Bankura and Purulia. These are semi-arid areas where the

agro-climatic conditions do not permit a prosperous agriculture, and which are periodically subjected to severe droughts. During the pre-independence years also these two districts were identified as major sources of labour supply to other parts of the state.⁵⁵ In recent years the problem of low and declining land-man ratio has become universal : the state ratio declined from 0.18 hectares in 1961 and 0.13 hectares in 1971, to 0.10 hectares in 1981, as the pressure of population mounted on an inelastic land supply.⁵⁶ Between 1951-52 and 1971-72, the average size of holdings in West Bengal declined from 1.89 hectares to 0.99 hectares, and then to 0.95 hectares in 1981.⁵⁷ The fact that the presently in this state is becoming increasingly marginalized is confirmed from the data on Agricultural Census for 1981, which show that the proportion of holding with less than two hectares of land increased from 87.1% in 1971 to 89.3% in 1981, while the proportion of land owned/operated by them increased from 55.6% to 60.4%, respectively, over this period.⁵⁸

This acute land scarcity has given rise to, what is known as, the 'pauperization process'. A former generation of small-farmer family, devoted to subsistence cropping and more or less self reliant at a low level of needs, is now finding it difficult to make its ends meet with cultivation alone. As the joint family is disintegrating and the land is being parcelled out among the brothers, each separate family is being forced to hire out its labour power to supplement its earnings from land. The growth in the proportion of agricultural labourers—from 19% of agriculture workers in 1951 to 26.45% in 1971 and 25.25% in 1981—is indicative of this trend.⁵⁹ In many cases landlessness is forcing people to migrate, temporarily or seasonally to start with and eventually as permanent migrants. However, landlessness was not caused solely by this pauperization process with the decline in land-man ratio.

Coming to (b) this landlessness coexists with a high concentration of land ownership. In 1971 while those having more than four hectares of land constituted 2.5% of holdings they accounted for 17.3% of land ; and, in 1981, the corresponding figures were 1.9% and 14.4% respectively, indicating only a slight decline in land concentration.⁶⁰

Land concentration was augmented by a variety of factors in the past : (i) the eviction of sharecroppers and other tenants, which took a heavy toll in the first three decades since independence. The eviction was made easier by the fact that the overwhelming majority of sharecropping agreements were made orally and could not be

proved in a court of law, and also that the sharecroppers and tenants, given their illiteracy and backwardness, were often ignorant about the rights to which they were entitled. In many instances, landlords took recourse to eviction as preemptive measures to prevent the sharecroppers from insisting on their legal rights.

(ii) The decline of village artisans, who once constituted an important section of the rural economy, because of competition from goods and services originating in the urban areas. This is reflected in the decline in the proportion of non-agriculturists among 'workers' from 9.30% in 1961 to 5.92% in 1971 and then a slight rise to 6.57% in 1981.⁶¹ Further examination of occupation-wise data shows a clear decline in the proportion of these engaged in household industries, particularly women.⁶² In many cases earnings from traditional occupations are not enough to maintain the large and growing artisan families, many of whose members are moving out to new areas in search of jobs.

(iii) The failure of many of the small farmers to compete with their larger counterparts when both are cultivating high yielding seed varieties. In some cases they are selling out land at a high price and settling into other non-land activities in new areas, and in some others they are retaining their land ownership only to lease out the land to bigger farmers and supplementing their rental income by work as labourers, sometimes outside their own villages.

All these three types of cases under group (b) indicate the process of proletarianization of the peasantry and the artisans as a result of the increasing commercialization of agriculture, particularly in areas like Hooghly and Burdwan.

This brings us to (c), the part played by the new agrarian technology in increasing landlessness and promoting migratory movements. However, in terms of the extent of high-yielding varieties coverage, the number of irrigation pumps and tractors, or the application of fertilizer, pesticide and other major inputs associated with this new technology, West Bengal is lagging far behind Punjab, Haryana, western Uttar Pradesh and other areas where the 'technology of green revolution' has become successful.⁶³ In this state the application of HYV technology is confined to some of the developed districts such as Burdwan, Hooghly, Howrah and parts of 24-Parganas, and here, given the fact that the labour-displacing tractors are few in number, the overall employment effect of the new technology has been so far positive as it has helped to

increase manpower demand by way of extension of area under double cropping and increased use of inputs. On the other hand, the increasing use of rice mills and paddy husking machines has reduced demand for female labour for this component of post-harvest activities.

The increasing commercialization and the associated shift to hired-labour based farming, as against traditional subsistence farming with family labour, have contributed to a decline in the participation rate of the rural work force, particularly of the female component. Between 1961 and 1971, the overall participation rate declined from 32.67 to 27.19, while that for the females declined from 10.62 to 4.58 compared to the decline from 53.47 to 48.48 in the case of the males.⁶⁴ The participation rate registered some improvement during 1981—with 28.31, 6.27 and 49.18 representing overall, female and male participation rates in the year.⁶⁵ This decline in participation rate is associated with a rise in the 'duration' i.e., the number of days worked in a year, in the case of the agriculture labourers.⁶⁶ This result is consistent with the negative relationship between participation and duration identified by this author in one of his earlier works based on village studies in various parts of the country. While in the less commercialized societies the social norms favour spreading of job among a large population, which gives rise to a high level of low-intensity participation, in the commercialized societies such job-spreading is discouraged and the employment of fewer individuals is intensified. Thus a structural changes brought about in the village societies by the commercialization process influence both participation and duration, and hence also migration. The village studies also confirm a higher migration propensity in cases of villages with unequal land distribution and a high level of landlessness.

However, migration is by no means a one-way traffic. According to the 1971 Census, of the 1.6 million refugees who came to West Bengal after India's independence, about 0.9 million moved to the rural areas,⁶⁷ while the direction of 83% of the intra-district migrants was towards the rural areas, though the vast majority of inter-state migrants—one million out of 1.4 million—moved to the urban areas.⁶⁸ Between 1961 and 1971 we have already noted, there has been a 7% shift in favour of the rural areas as the destination of the migrants.

A great deal of such migration is rural-rural, seasonal and over a short distance. It is interesting to note that very often areas with a

high propensity to outmigrate to the towns are those with a high level of immigration from the less privileged rural areas. This is true of many areas of Hooghly and Burdwan, as also Howrah, from where a large number of people commute to Calcutta everyday.

We have already noted in another paper the pre-independence tendency of the migratory movements to converge on the five districts in and around Calcutta.⁶⁹ This tendency is also in evidence today, more so because, apart from their urban pull, these also happen to be some of the most prosperous agricultural areas of the state. The dichotomy between these districts and the backward districts of north and western West Bengal is an important aspect of the inter-regional pattern of population movements in the state.

Since the issue of excessive concentration of urban settlements has been dealt with in another paper,⁷⁰ we are not referring to this here, excepting to note that spatial concentration, as well as concentration in terms of employment opportunities and industrial activities, has both given rise to the regional imbalance mentioned above, and also migratory movements from the less developed districts to the more developed ones around Calcutta.

VII Impact of migration on rural and urban economy

In our discussion so far we have identified the following three types of inequalities which promote migration :

(a) inequality in the agrarian structure, reinforced by the spread of commercialized farming;

(b) inter-regional inequality, resulting from the uneven development of the countryside, partly because of differences in resource-endowment, and partly because of the deliberate government policy of selective development and promotion of infrastructure in the more developed areas;

(c) disparity between the urban areas and the vast countryside, the latter being treated as a reserve pool of labour power which could be tapped according to the needs of industrialization in the towns and cities; and such disparity being aggravated by cultural and other factors even in conditions where urbanization has grossly exceeded the economic growth rate of these centres and the urban unemployment is widespread.

The question we pose to ourselves in this section is : while migration propensity is a function of these disparities, could migration be seen at the same time as an equilibrating mechanism which would eventually bring down such inequalities and also the flow of migration in the long run ?

Lewis model

In fact this is the role which has been ascribed to migration by the Lewis model.⁷¹ Although this model does not explicitly deal with these specific inequalities, its framework is broad enough to accommodate those. In a nutshell the model can be described as follows. It is based on a concept of a dual economy; with a subsistence, agricultural sector characterized by disguised unemployment, and a capitalist sector where full employment rules and where the capitalists reinvest the full amount of their profit. In the subsistence sector, where their marginal productivity is zero, the family workers are paid a wage which equals the cost of their subsistence; but in the industrial sector they are paid a premium above that subsistence wage in order to compensate for a higher cost of living in the urban areas, the psychic cost of adjustment to the new environment, and the cost of migration.

In this dual economy set-up migration from the subsistence to the capitalist sector increases industrial production and capitalist profit. The profit is fully reinvested in the capitalist sector which further increases the demand for labour from the subsistence sector, whose supply to the capitalist sector is assumed to be elastic at the going wage. This process will go on for ever, as long as the supply of labour from the subsistence sector is elastic at the going wage; if the rate of population growth in the subsistence sector exceeds the rate of offtake of labour from that sector this process might never end.

What would be the impact of this process on rural development? Assuming that the rate of rural-urban transfer of manpower exceeds the natural growth in the rural population, the following consequences will follow. First, in the rural sector the average product per head would increase. Secondly, the terms of trade would move in favour of the agricultural sector, as the relative size of the two sectors changes and the demand for subsistence goods from the urban sector grows. Thirdly, a decline in dependence, and increase in output per head, and a shift in the terms of trade—these, taken together, would create a favourable condition for the introduction of advanced techniques which would increase the productivity of agriculture. Migration would thus bring about a balance between the two sectors in the allocation of labour and income, and in terms of productivity. Taken to its logical extreme, the path of industrialization-urbanization depicted in this model would eventually equalize the earnings in the two sectors and bring down the rate of migration if not eliminating it completely.

Is migration a self-correction mechanism ?

We find that in the case of West Bengal migration has not been accompanied or followed by 'depopulation' of the countryside, or a shift in the terms of trade in favour of agriculture, or a high level of mechanization, nor has it shown any sign of working itself out, or of acting as an equilibrating mechanism. The villages of Uttar Pradesh, which began sending migrants to the jute factories of Calcutta about hundred years ago, are continuing to do so; and the outward movement of workers from the districts of Bankura and Purulia towards relatively prosperous rural areas of the state shows no sign of abating. The migratory process, once started, does not easily stop, although destinations might change or become diversified. Migration continues even when the conditions which originally favoured such migration cease to operate, poor villages turned rich do not turn off the flow, though organized migration is replaced by voluntary migration, and the direction of migration might change, as also the work they do in the destination. In these cases, migration becomes a part of the tradition, the way of life of the people concerned.

Nor does the process of migration help to bring equality with in the village. Migration provides the better-off households with migrating members (a) with the means to provide the initial cost of further migration, (b) with the necessary knowledge and contact, (c) with the opportunity to diversify their earning opportunities, and then (d) with remittances from migrants to purchase expensive agricultural machineries—all these help to widen the gap which separates them from their less privileged counterparts. Even in cases of migrants from poor families, who return after a period, the tendency is to buy land, improve residential building, contribute generously to religious festivals and political parties and thereby, to consciously detach themselves from their poor relations. Even when the level of prosperity for the village as a whole is raised by migration, this goes hand in hand with widening disparity between the rich (including the returned migrants and the remittance-receiving families) and the poor. Further, by attracting poor rural migrants from other areas, such inter-village disparity is further widened.

Thus, both inter-regional and intra-village inequalities continue, and are often reinforced, in the process of migration.

Migration leads to widening inequality between the more developed core of districts and the rest of the rural and urban areas in

another way—by way of ‘brain drain’, of the younger, more resourceful and more skilled and enterprising section of the population. Such brain drain often implies transfer of both human and financial resources, in terms of the cost of the training of these skilled personnel in the less developed areas and the transfer of saving to finance the initial phase of migration. On the other hand, migration augments the resources in the origin by way of remittances and by the skill, experience and knowledge transmitted through such contact with more developed areas. There is no quantitative estimate of the net impact of migration on the origin, whether rural or urban areas, but even assuming that such impact is on the whole favourable to the origin, this does not necessarily reduce the inequality between the core and the periphery which initially prompted such migration.

We have already noted that migration does not lead to depopulation of the countryside or the urban areas of origin, and therefore its impact on production can not be negative. What it does is no more than skimming off a part of the under-utilized labour force in the origin. However, the extent of such migration is age-gender selective, particularly in cases of voluntary migration, there is likely to be a tendency towards ‘feminization’ and ‘senilization’ of the population, as evidenced in many other countries, and other parts of India too. This can not be confirmed on the basis of the data available to us; and would require data at village and town levels to establish correlation between migration propensity and age-gender structure.

However, the demographic impact is more revealing in case of the larger urban and industrial areas, where the female-male ratio is low. Statistical evidence would confirm an association between city size, the age of the city (negatively), the industrial component in its work force and the proportion of migrants in the population on the one hand and the gender-ratio on the other. This point too has been further elaborated in another paper in this volume,⁷² as also some of the other consequences of such migration for the towns and metropolis of West Bengal, such as congestion, urban unemployment and social tension.

VIII Policy issues

What then would be the policy approach of the state government towards such migratory movements? To start with, let this be admitted that such migration can not be prevented by force, or

through regulations and rules. If people want to come to the towns and squat on the pavements, there is little that a state government can do to prevent it. Secondly, it should also be noted, that despite the various problems created by large scale migration, e.g., in terms of deteriorating civic facilities, the positive aspects of the migratory movements should not be overlooked. Such movements, apart from widening the horizon of the participants and helping to iron out local deficits and surplus in labour power, have been historically responsible for the advance of human civilization by spreading new ideas, technologies and innovations. In the Indian context, migration plays the important role of integrating the segmented labour markets, and developing new identities of working people irrespective of their caste, religions or linguistic loyalties. Migration, thus, can be seen as an important instrument promoting national integration; while at the same time it is true that very often the identifiable migrant groups become the scapegoats for all the ills of a society and are subjected to attack from the chauvinist forces.

Here we take the view that migration is desirable *per se*, but such movements should be voluntary, and should not be induced by natural, social or political calamities, or should not be largely due to various inequalities noted above. Solutions which suggest themselves are not measures to restrain migration as such, but to ensure that (a) such movements do not arise from inequalities or various calamities, and (b) are synchronized with the demand for labour power and availability of infrastructural facilities, and are suitably paced over time.

One set of issues would relate to the control of natural calamities or to minimize their impact by way of early warning systems and elaborate relief measures. A better system of weather monitoring might help to forecast drought, and to induce farmers to opt for crops with low water intensity. Similarly, a better monitoring of water levels all along the route of the Ganges and other major rivers might help to undertake timely measures for the evacuation of villagers or to strengthen the river embankments to avoid inundation of large areas in year of flood. Long term measures of flood prevention involve prevention of deforestation in the hills and the adjoining plains and river valley programmes.

At the same time, proper and prompt relief measures at the village level might help to avoid unwarranted migration towards the towns and cities. In this respect the experience of West Bengal since the establishment of a well-organized panchayet system in 1978 is

educative for other states in the country. With a well functioning elected self-government at the grass roots, which carries the confidence of the rural masses and is empowered to discharge relief measures, it has been possible to stop the outward movement of the villagers during the years of drought and flood in the case of West Bengal. Even the mighty flood of 1978, which affected one-third of the land area, and the severe drought which reduced aman crop production by 40% in 1981-82, did not lead to the usual city-ward movement in West Bengal, thanks to the immediate actions taken by the panchayets to bring relief to the people.

As for the growth of landlessness and marginalization of the peasantry, which can not be altogether avoided, the success of the Left Front Government in preventing eviction of the sharecroppers and other tenants by recording their names through 'operation barga', in arranging distribution of land to 1200000 landless families, and in providing credit and 'mini-kits' to those families,⁷³ have helped to combat the tendency towards landlessness to a considerable extent. As the figures given by the 1981 Agricultural Census suggest, over time, particularly in recent years, there has been a certain reduction in the inequality in land distribution following a better implementation of the land reform legislations in this state.⁷⁴

Despite these successes with respect to land reform and panchayet development, disparities continue, and so the migratory movements. The process of marginalization of the peasantry, and the growing fragmentation of holdings can not be halted by those measures alone. Land being more or less inelastic in supply, and there being limits to extension of double cropping for augmenting labour demand in agriculture, there are also limits to labour absorption in agriculture. At the same time, the option of exporting under-utilized labour power in the countryside to the towns is severely constrained by gross under-utilization of labour power in the latter too, as reflected by the presence of a large and expanding 'informal sector'. It seems, that at least in the short run, the alternative of rural-urban migration would merely aggravate the existing problems of acute unemployment and under-employment in the urban sector, in addition to giving rise to other problems such as overcrowding, a decline in the supply of civic amenities and various types of social tension. Both of these considerations—the limits to labour absorption in agriculture and in the towns—point to a third possible solution : the expansion of non-agricultural activities

in the countryside, such as rural industries, animal husbandry, fishery and horticulture. In recent years there has been some improvement in respect of these four activities particularly with respect to the establishment of the new rural industries, but their success would eventually be reflected in the proportion of 'non-agriculturalists' in the working population in the countryside, which is still very low.

Table 1

Percentage Distribution of Rural Population by Birth

| | 1961 | | 1971 | |
|---|-------|---------|-------|---------|
| | Males | Females | Males | Females |
| Born in place of enumeration | 80.3 | 55.4 | 84.9 | 61.1 |
| Born elsewhere in district of enumeration | 8.1 | 32.1 | 6.4 | 28.0 |
| Born in other districts in the state | 2.2 | 4.3 | 1.7 | 4.2 |
| Born in other states | 3.1 | 2.2 | 1.9 | 1.8 |
| Born in other countries | 6.3 | 6.0 | 5.1 | 4.9 |

Source : *Census of India*, Special Monograph No. 1, New Delhi, 1974.

Table 2

Percentage Distribution of Migrants by Sex and Types of Migration

| Type | | Intra-District | | Inter-District | | Inter- state | |
|-------------|---|----------------|------|----------------|------|--------------|------|
| | | 1961 | 1971 | 1961 | 1971 | 1961 | 1971 |
| Rural-Rural | M | 62 | 67 | 15 | 15 | 23 | 18 |
| | F | 84 | 84 | 10 | 11 | 6 | 5 |
| Rural-Urban | M | 14 | 15 | 21 | 22 | 65 | 63 |
| | F | 30 | 39 | 30 | 29 | 40 | 32 |
| Urban-Rural | M | 37 | 34 | 43 | 42 | 20 | 24 |
| | F | 48 | 43 | 42 | 45 | 10 | 12 |
| Urban-Urban | M | 20 | 12 | 33 | 35 | 47 | 53 |
| | F | 28 | 20 | 42 | 48 | 30 | 32 |

Source : *Census of India*, Special Monograph No. 1, New Delhi, 1974.

Table 3
Percentage of Migrants

| | 1971 | 1961 |
|---------------------|-------|-------|
| In total population | 30.40 | 37.18 |
| In urban population | 38.50 | 53.96 |
| In rural population | 27.80 | 31.74 |
| Among men | 23.40 | 29.66 |
| Among women | 38.00 | 45.74 |

Source : *Census of India, 1971, West Bengal and Sikkim*, Vol. XVI
Part II (i), (ii), Delhi, 1974; Monograph No. 1, op. cit.

Table 4
**Distribution of Male Migrants-1961 and 1971 (Percentages
given in parenthesis)**

| Year | Total | Within district | Outside district but within state | From other states | From outside India | Not known |
|------------|---------------------|--------------------|---|-------------------------|--------------------------|-----------------|
| 1971 Total | 5513710 (100.00) | 1535025 (27.84) | 875910 (15.89) | 1449990 (26.30) | 1635605 (29.66) | 17180 (0.31) |
| Urban | 2461860 (44.65) | 265015 (10.76) | 525790 (21.36) | 978470 (39.75) | 692575 (28.13) | 10 (-) |
| Rural | 3051850 (55.35) | 1270010 (41.61) | 350120 (11.47) | 471520 (15.45) | 943030 (30.90) | 17170 (0.57) |
| 1961 Total | 5516903 (100.00) | 2172473 (39.38) | | 1569898 (28.46) | 1756404 (31.48) | 18128 (0.32) |
| Urban | 2847902 (51.62) | 776435 (27.26) | | 1154525 (40.54) | 915823 (32.16) | 1119 (0.04) |
| Rural | 2669001 (48.38) | 1396038 (52.31) | | 415373 (15.56) | 840581 (31.49) | 17009 (0.64) |

Source : *Census of India, 1971, West Bengal and Sikkim*, Vol. XVI,
Part II (i) (ii), Delhi 1974; Monograph No. 1, op. cit.

Table 5**Migration : Gender Location Breakdown 1961 (Percentages in parenthesis)**

| | Total | Male | Female |
|-------|----------------------|--------------------|--------------------|
| Total | 12984663 (100.00) | 5516903 (42.49) | 7467760 (57.51) |
| Urban | 4608820 (35.49) | 2847902 (51.62) | 1760918 (23.58) |
| Rural | 8375843 (64.51) | 2669001 (48.38) | 5706842 (76.42) |

Source : *Census of India, 1971, op. cit., Census of India, 1961.*

Table 6**General Population : Gender-Location Breakdown 1961 (Percentages in parenthesis)**

| | Total | Male | Female |
|-------|----------------------|---------------------|---------------------|
| Total | 34926279 (100.00) | 18599144 (53.25) | 16327135 (46.75) |
| Urban | 8540842 (24.45) | 5020100 (26.99) | 3520742 (21.56) |
| Rural | 26385437 (75.55) | 13579044 (73.01) | 12806393 (78.44) |

Source : *Census of India, 1971, op. cit., Census of India, 1961.*

Table 7**Migrants : Gender -Location Breakdown 1971 (Percentages in parenthesis)**

| | Total | Male | Female |
|-------|----------------------|--------------------|--------------------|
| Total | 13551870 (100.00) | 5513710 (40.69) | 8038160 (59.31) |
| Urban | 4208160 (31.05) | 2461860 (44.65) | 1746300 (21.73) |
| Rural | 9343710 (68.95) | 3051850 (55.35) | 6291860 (78.27) |

Source : *Census of India, 1971, op. cit.*

Table 8

General Population : Gender-Location Breakdown 1971 (Percentages in Parenthesis)

| | Total | Male | Female |
|-------|----------------------|---------------------|---------------------|
| Total | 44440095 (100.00) | 23488244 (52.85) | 20951851 (47.15) |
| Urban | 10928389 (24.59) | 6227006 (26.51) | 4701393 (22.44) |
| Rural | 33511696 (75.41) | 17261238 (73.49) | 16250458 (77.56) |

Source : *Census of India, 1971, op. cit.*

Table 9

Distribution of Inter-State Outmigrants and Immigrants in 1961 and 1971 (Unit-One hundred)

| Category | 1961 | | | 1971 | | |
|---|-------|--------|-------|-------|--------|-------|
| | Male | Female | Total | Male | Female | Total |
| Immigrants to rural areas of West Bengal | 4133 | 2737 | 6870 | 3246 | 2988 | 6234 |
| Immigrants to urban areas of West Bengal | 11553 | 3899 | 15452 | 9442 | 3340 | 12782 |
| Total Immigrants | 15686 | 6636 | 22322 | 12688 | 6328 | 19016 |
| Outmigrants from rural areas of West Bengal | 1660 | 2217 | 3877 | 1723 | 2643 | 4366 |
| Outmigrants from urban areas of West Bengal | 1088 | 1062 | 2150 | 1590 | 1713 | 3303 |
| Total | 2748 | 3279 | 6027 | 3313 | 4355 | 7669 |

Source : *Census of India, 1971, op. cit.*

Notes

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2. See the following surveys of literature : John Connell, Biplab Dasgupta, Roy Laishley and Michael Lipton, *Migration from Rural Areas*, Delhi, 1977; Henry Rempel and Richard A. Lobdell, *The Rural Impact of Rural-Urban Migration*, I.L.O., Geneva, 1976; M. P. Todaro, *International Migration in Developing Countries*, I.L.O., Geneva, 1976; J. Gaude, *Causes and Repercussions of Rural Migration in Developing Countries—A Critical Analysis*, I.L.O., Geneva, 1976.
3. Connell *et al.* op. cit.
4. E. M. Godfrey, 'Economic Variables and Rural-urban Migrations Some Thoughts on the Todaro Hypothesis', *Journal of Development Studies*, 10 (1), 1973.
5. W. A. Lewis, 'Economic Development with Unlimited Supplies of Labour', *Manchester School of Economic and Social Studies*, Vol. XXII, 1954.
6. Ibid.
7. L. Sjaastad, 'The Costs and Returns of Human Migration', *Journal of Political Economy*, 70(5), Part II, 1962.
8. M. P. Todaro, 'A Model of Labour Migration and Urban Employment in Less Developed Countries', *American Economic Review*, 59(1), 1969; J. Harris and M.P. Todaro, 'Migration, Unemployment and Development: Two Sector Analysis', *American Economic Review*, 60(1), 1970.
9. See for example, G. E. Johnson, 'The Structure of Rural-urban Migration Models', *East African Economic Review*, June, 1971; G. S. Fields, 'Rural-urban Migration, Urban Unemployment and Job-Search Activities in LDC's', *Journal of Development Economics*, Vol. 2, 1975.
10. Ibid.
11. The point regarding non-random distribution of migrants was first made in Biplab Dasgupta, *Migration and Rural Employment*, F.A.O, Rome, 1980; for other points see Jorge Balan (ed), *Why People Move : Comparative Perspectives on the Economics of Internal Migration*, UNESCO, Paris, 1981, Godfrey, op. cit.
12. Balan, op. cit., in particular the following papers in that volume : Lourdes Arizpe, 'Relay Migration and the Survival of the Peasant Household'; Brigida Garcia, Humberto Munoz,

and Orlandina de Oliviera, 'Migration, Family Context, and Labour Force Participation in Mexico City'.

13. In the case of West Bengal jute industry, the factories had to be kept closed for several months in a year in the early days to permit the workers to return home for work on land. See, Biplab Dasgupta, 'Agricultural Labour under Colonial, Semi-capitalist and Capitalist Conditions, A Case Study of West Bengal', *Economic and Political Weekly*, September 29, 1984.
14. Connell, *et. al.*, *op. cit.*
15. Not only the pastoralists, even in seasonal migrations, families belonging to a given village often move together. See for example, P. Pathare, M.P. Dhongde, and T. R. Acharya, 'Seasonal Migratory Agricultural Labourers at a Cooperative Sugar Factory in Maharastra', *Indian Journal of Agricultural Economics*, Vol. 27, No. 1, 1972.
16. *Ibid.*
17. S. Chandrasekhar, 'Growth of Population in Madras City : 1939-1961', *Population Review*, January, 1964.
18. Biplab Dasgupta, *Labour Migration and the Rural Economy*, F.A.O, Rome, 1984.
19. Hugh Tinker, *A New Form of Slavery*, London, 1973.
20. Biplab Dasgupta, *Labour Migration and the Rural Economy*, *op. cit.*
21. See Ambica Ghosh, *Calcutta-The Primate City*, Census of India, Delhi, 1971; Sumita Ghosh, 'A Preliminary Note on the Beggars in Kalighat', *Journal of the Indian Anthropological Society*, April 1971; Chandrasekhar, *op.cit.*, Dasgupta, *op. cit.*
22. Sumita Ghosh, *op. cit.*
23. Biplab Dasgupta, 'The Evolution of Settlements and of the Urban Classes', (paper presented to a conference on urbanization in West Bengal at the Centre for Urban Economic Studies, Calcutta University, 1986.
24. Biplab Dasgupta, 'The Mode of Production in pre-British Bengal', *Social Scientist*, August, 1984.
25. Biplab Dasgupta, 'Agricultural labourers....', *op. cit.*
26. Biplab Dasgupta, 'The Evolution of Settlements...' *op. cit.*
27. For example, the famine of 1770, which took six lives out of every sixteen, and the malaria epidemic of the 1850s which reduced the population in some districts by one-third. Both of these, by reducing labour supply, necessitated labour migration

- from other areas. Sec, Dasgupta, 'Agricultural labourers....', op. cit.
28. Sumita Ghosh, op. cit.
 29. Ibid.
 30. S. N. Sen, *The City of Calcutta—A Socio-Economic Survey*, Calcutta, 1960.
 31. Between 1946 and 1970, 42.03 lakhs of refugees came from East Pakistan to West Bengal. (Source : Office of the Refugee Rehabilitation Commissioner, quoted in Bengal Chamber of Commerce and Industry, *West Bengal—An Analytical Study*, Calcutta, 1971, pp. 22-23.)
 32. Ambica Ghosh, op. cit.
 33. N. C. Chakrabarty, 'Report on the Survey of Refugee Population West Bengal', Calcutta, 1949 (mimeographed); U.C.R.C., memorandum to the Governor of West Bengal, Calcutta, 1963; S. N. Sen, op. cit. 'A Survey (C.M.P.O.) Bijaygarh Colony, 1965-66', Calcutta, 1966 (unpublished) showed that 38% of the workers among the refugees in a Calcutta colony were engaged in clerical activities, 18% in teaching and professional jobs, and only 16% in work as labourers, while the vast majority of the rest took up trading activities of various sorts.
 34. Slightly more than one-tenth of the refugees (4.53 lakhs) were rehabilitated outside West Bengal. (Bengal Chamber of Commerce, op. cit.)
 35. This was by no means an easy task, as the refugees took over land in the reserve forest area in the Sunderbans which was under the 'Tiger Project', and a large section of them refused to move (Source : press reports).
 36. Government of West Bengal, State Statistical Bureau, 'Rehabilitation of Refugees—A Statistical Survey', Calcutta, (unpublished); U.C.R.C., 'An Alternative Proposal for Rehabilitation of Camp Refugees in West Bengal', memorandum submitted to the Chief Minister of West Bengal on 31.8.1956.
 37. Tinkar, op. cit., George A. Frierson, 'Report on Colonial Emigration from the Bengal Presidency', Calcutta, 1983.
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 40. Most of the data used in this section have come from the

Census publications, 1971.

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43. Thomas B. Timberg, 'A Note on the Arrival of Marwaris', *Bengal Past and Present*, Jan-June, 1971; Nirmal Kumar Bose, 'Social And Cultural Life in Calcutta', *Geographical Review of India*, December, 1958; 'Calcutta—A Premature Metropolis', *Scientific American*, July, 1965; *Calcutta—A Social Survey*, Calcutta, 1971; N. K. Sinha, *Economic History of Bengal*, Vol. 3, Calcutta, 1965.
44. Ibid.
45. Biplab Dasgupta, 'Calcutta's Informal Sector', *Bulletin of the Institute of Development Studies*, University of Sussex, 1975.
46. Ibid. Government of West Bengal, State Statistical Bureau, op. cit.
47. Sen, op. cit.
48. Ibid.
49. The family size of the Hindustanis is 2.8, compared to 5.4 for the Bengalee; and the respective proportions of children for 0-4 age group for these two communities were 20% and 34% in the mid-fifties. (Sen, op. cit.). For the remittances see Asoke Mitra, *Calcutta—India's City*, Calcutta, 1967.
50. Shyamal Chakrabarty, *Housing Conditions in Calcutta*, Calcutta, 1960.
51. Biplab Dasgupta, 'Agricultural labourers...', op. cit.
52. Usha Dhar, 'Economic Characteristics of Migrants to Towns and Cities', paper to the *Indian Census Centenary Seminar*, Delhi, 1972; Census of India, 1911.
53. Census of India, 1931.
54. Dikshit Sinha, 'Life in a Calcutta Slum', in Surajit Sinha (ed), *A Cultural Profile of Calcutta*, Calcutta, 1972.
55. Biplab Dasgupta, 'Evolution of Urban Settlements...', op. cit.
56. Government of West Bengal, *Economic Review* of relevant years.
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60. Agricultural Census of India, 1970-71, 1975-76 and 1980-81.
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66. However, on this point the evidence is not up to date. Along with the decline in participation rate, the number of days worked by agricultural labourers went up : from 239 in 1950-51 to 297 in 1964-65. This is in accordance with the hypothesis that participation and duration are negatively linked. See, Biplab Dasgupta, *Village Society and Labour Use*, Delhi, 1977; See also, Government of India, Ministry of Labour and Employment, *Agricultural Labour in India-Report on the Second Agricultural Labour Enquiry, 1956-57*, All India, Delhi, 1960.
67. Census of India, 1971.
68. Ibid.
69. Biplab Dasgupta, 'Evolution of Urban Settlements...', op. cit.
70. Biplab Dasgupta, Nandita Basak, Arunava Bhattacharya, Bhaskar Bhattacharya and Pabitra Giri, 'Urbanization in West Bengal-Patterns and Trends : 1971-81', paper presented to the Conference on Urbanization at the Centre for Urban Economic Studies, University of Calcutta, 1986.
71. Lewis, op. cit.
72. Biplab Dasgupta, 'Urbanization and Rural Change in West Bengal' 14th and 21st February 1987.
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HOW URBAN IS URBAN WEST BENGAL ?

Sukumar Sinha

This paper has to start with an apologia, if it is warranted at all, for initiating the discussion on the 1971 Census data well after the 1981 Census has been conducted and the provisional figures have since been published on selected items. The choice of the topic and also the data base of 1971 has been deliberate, since the 1981 Census data on the theme of the instant discourse, now being presented, are still on the anvil in the processing stage. Besides, the urban situation of 1971 has not changed much even after a decade, as will be evident from some current statistics. The number of towns in West Bengal rose from 223 in 1971 to 291 in 1981 at the decennial growth rate of 30.5%. The statutory towns changed from 98 (43.9% of all towns) in 1971 to 105 (36.1% of all towns) in 1981, the growth rate having been only 7.1% in the decade. The urban population of 10,967,033 which accounted for 24.75% of total population of the state in 1971 grew at a decennial growth rate of 31.61% so as to lead to the urban population of 14,433,486 in 1981 constituting 26.49% of the total population of West Bengal. In 1971 only 2.2% of the total area of West Bengal was urban; the corresponding 1981 figures being still unknown.¹

This paper is divided into two parts. In part one, we deal with the nature and extent of urbanization, and in part two, issues relating to municipalization of towns have been discussed.

1 The extent of urbanization

The urban connotation is like a double-edged sword. While the population by virtue of their residence in an area, defined as urban, becomes urban, the population too, because of some specific demographic characteristics, attribute an urban character to a non-urban or rural area. Certain areas, statutorily defined as urban because of the constitution of Corporations, Municipal Corporations, Municipalities, Town Committees, Cantonments etc., are treated as urban, irrespective of the number of persons living there and independent of the characteristics of the population. On the other hand, a mouza with a population of at least five thousand, a density of 400 persons per square km and with at least

75% of the male workers in non-agricultural pursuits will have the chance to qualify as an urban area which in census parlance is known as a non-municipal town or non-statutory census town. The second criteria have been uniformly adopted since 1961 Census till date.

The urban population in West Bengal became five-fold in course of seventy years since 1901 when the urban population of a little over two million constituted 12.2% of the total population of the state. In 1971 the urban population of 10.9 million in 223 towns accounted for 24.75% of the total population of the state. The urban population in 15 cities (Class I towns each with a population of one lakh and above) stood for 54.9% of the total urban population in 1971. The share of the population in 31 towns of Class II size (each with a population of 50,000-99,999) was 19.4% of the total urban population. In 49 Class III towns (each with a population of 20,000-49,999) lived 13.8% of the urban population of the state in 1971. The number of Class IV towns (each with a population of 10,000-19,999) was 60 wherein lived 7.5% of the urban population of West Bengal. While the population in 59 Class V towns (each with a population of 5,000-9,999) constituted 4.9% of the total urban population in 1971, only 0.33% of the state's urban people were residents in 9 Class VI towns (each with a population below 5,000). Statutory civic bodies like municipalities were non-existent in 124 towns (3 Class II, 14 Class III, 47 Class IV, 53 Class V and 7 Class VI) which were left to the care of either Anchal Panchayats or derelict Union Boards, institutions pre-eminently rural.

Rail routes did not connect 91 towns in 1971. As regards communications, *kutchra* roads were not the exclusive preserves of only rural areas. Co-existent with *pucca* roads, *kutchra* road lengths per 100 sq. km of area were 198 kms in Class I towns, 239 kms in Class II towns, 252 kms in Class III towns, 130 kms in Class IV towns, 159 kms in Class V towns and 109 kms in Class VI towns. Along with *kutchra* and *pucca* roads ran open surface drains in 101 towns (2 Class I, 11 Class II, 21 Class III, 31 Class IV, 33 Class V and 3 Class VI), but remarkably enough, there was no sewerage or drainage system in 42 towns (3 Class II, 7 Class III, 16 Class IV, 14 Class V and 2 Class VI) at all.

As regards health facilities, the number of beds per ten thousand population was 283 for Class I towns, 228 for Class II towns, 261 for Class III towns, 479 for Class IV towns, 106 for Class V towns and 165 for Class VI towns. The number of beds in a way connoted the

limits beyond which the number of sick persons of towns of different size classes requiring hospitalization had to fend for themselves. It requires no statistical proof that a large number of the urban population in such a situation had to be confined to their homes, and not in hospitals, because of the inadequacy of beds. While the numbers of primary and secondary schools per million population in urban West Bengal as a whole stood at 429 and 113 respectively, the same in Class I towns were 330 and 90, 465 and 119 in Class II towns, 597 and 146 in Class III towns, 539 and 148 in Class IV towns, 816 and 209 in Class V towns and 604 and 357 in Class VI towns. An element of rank inequality pervaded the distribution of primary and secondary schools in towns of different size-classes. The philosophy that the need for primary and secondary schools in Class VI and Class V towns was greater than that in towns of higher size-classes is difficult to comprehend.

In respect of some other elementary civic amenities one will notice a sharp polarization of the towns into the categories of haves and have-nots. On the basis that some basic amenities are wanting in some towns, it is not a facile task to differentiate them from many rural areas in West Bengal. While 179 towns had service latrines, 30 had none; 17 towns had no protected water supply (not always potable water-supply through pipe lines) of any kind. In case of an outbreak of fire, 168 towns could not summon the services of fire fighters, as none had any such facility. Stadia were lacking in 202 towns, 84 towns had no cinema, 20 towns had no public library and 60 towns had no bank.

The per capita expenditure on civic services and amenities was shockingly low and inadequate to vouchsafe the modest comforts of an urban life. The per capita annual expenditures on public health and conveniences as well as on public institutions were Rs. 9.62 and 0.40 p respectively for Class I towns, Rs 4.74 and Rs 1.32 for Class II towns, Rs 4.33 and Rs 1.38 for Class III towns, Rs 1.73 and 0.39 p for Class IV towns, Rs 1.26 and 0.76 p for Class V towns and 0.21 p and 0.06 p for Class VI towns. The towns of the last category had the pittance for civic expenditure which was even less than what a mendicant would receive daily in one dose of alms from a person of charitable disposition.

From the point of functional character of the towns based on 60% participation of the workers of each in one or more industrial categories, 109 towns were monofunctional (20 characterized by

primary activity, 69 by industrial activity, 1 by commercial activity, 6 by transport activity and 13 by service activity), 51 towns were bifunctional (but in 10 such towns primary activity was predominant) and 63 were multifunctional (of which 14 towns were dominated by primary activity). Thus, primary activity shaped the functional character in 44 towns.

Turning from towns to townsmen in West Bengal, one may not agree with Cowper that 'God made the country and man made the town.' It will be apt to say that villagers made the towns in West Bengal in 1971. Roughly, 25% of the urban population in West Bengal in 1971 were immigrants by place of birth, with 53% having been born in rural areas. Even with reference to place of last residence it is observed that 27% of the urban population of West Bengal in 1971 were immigrants of which 50% had their last residence in some rural areas.

It is no wonder that all the immigrants to the urban areas of West Bengal found no cosy haven there in 1971. About 1.6% of the urban households with 0.6% of the urban population had to seek shelter in the streets or in the open with the azure sky providing the only roof overhead. Of the households sheltered in some house or the other in urban West Bengal in 1971, about 63% had to remain content with only one room in the occupation of each, irrespective of the number of members therein. Urban areas provided good pastures for real estate-owners, as 60% of the household lived in rented houses.

Discussing about households, one should not be oblivious of 2.1% of the households in urban areas which were institutional wherein 2.5% of the urban population lived, even without any affinal or consanguineous relationship binding them together. Again, 8.0% of all urban households with 1.4% urban population living in houses led solitary life, as they were single-membered.

That brick walls alone did not make a town is evident from the existence of palaces, modest pucca structures and pitiable hovels with thatched roof. If burnt bricks, C.I. sheets or other metal sheets, stone and cement made the walls of urban houses durable and if tiles, slate, C.I. sheets, lime, stone, R.B.C., cement concrete etc. imbued the roof with a semblance of permanence, 74.0% of the urban houses were *pucca* and 6.3% of the houses were fully *kutchha*. The existence of *kutchha* houses as vestiges of rural life was in fact an extension of ruralism into the urban scenario and, as such, incongruous.

Urban population in West Bengal in 1971 stole a march on the rural people in the field of education and literacy. About 62.0% of the males and 47.8% of the females in the urban areas were literates and educated, whereas only 35.8% of the rural males and 15.0% of the rural females were in the same enlightened category. But, whatever the rural-urban differentials in literacy, education produced in the urban areas a vast population able to read and write but unable to provide the open-sesame to all to earn a livelihood. The rural-urban differentials in the male participation rates were not as sharp as those in literacy. Against 48.5% of the rural males, only 49.8% of the urban males were workers. But, participation rate among the rural females was marginally higher than that among the urban females.

Against this backdrop, the spectre of poverty had cast its ominous gloom on 60.30% of population living below the poverty line in urban West Bengal in 1970-71 (NSS 25th round). No body could be sure of the hopes the urban people in general could have nursed in their hearts. The urban poor, however, notionally better from the status point of urban residence than their rural counterparts, could only brag about saying, 'we all live in a state of ambitious poverty.'

II The municipalization of towns

The traditional method of presentation of demographic data all over the world including India has been to categorize the population as rural and urban residents in the place of enumeration for the reference period of enumeration with regard to a particular reference date (the sunrise of 1st March of the Census year—exception being 1st April in 1971). The geographical area, recognized as the administrative unit for the presentation of census data, is either a village or a revenue mauza in West Bengal or a town. A mauza which is not declared as urban by a statutory order for the establishment of a Corporation, Municipal Corporation, Municipality, Notified Authority, Cantonment, Town Committee, etc., for the civic management of the area or a village which does not evince certain defined urban characteristics of its resident population (e.g. minimum size of population—5,000, density of population per km^2 —400 and participation of male working force in non-agricultural activities—75%) is treated as a rural area. Thus, an urban area, if statutory, indicates the existence of a statutory civic body different from the *panchayati* form of organization entrusted with the management of socio-economic problems including civic problems

of the area. But, a non-statutory urban area presupposes the non-existence of any urban form of statutory civic body for the management of civic problems of the resident population and normally indicates the existence of *panchayats* responsible for overseeing the solution of such problems.

The number of urban areas or towns statutory and non-statutory, of various size classes of population in West Bengal in 1981 has been 291, of which 105 (36.1%) are statutory. Since all these towns had their origin in different census years, and were of different size-classes of population (namely, I for 1 lakh population, II for 50,000-99,999 persons, III for 20,000-49,999 persons, IV for 10,000-19,999 persons, V for 5,000-9,999 persons and VI for below 5,000 persons) with a statutory urban or rural civic body, it will be rewarding to have a look at the towns of 1981 Census retrospectively from 1901 onwards with reference to their origin, size and statutory status from Tables 1 and 2, the former table relating to the statutory towns of 1981 Census in West Bengal and the latter to the non-statutory ones of 1981 Census.

The evolution of the statutory towns shows a definite pattern against the watershed of the independence of India. The majority of the statutory-towns of 1981, as evident from Table 1, have had their birth before independence. The period 1901-11 witnessed the birth of 93 towns (88.6% of the statutory towns of 1981 Census). In 1901 alone there were 74 towns, all statutory, accounting for 70.5% of the present day statutory towns. 79.6% of the present day statutory towns had come into existence before independence. Of these 93 towns, 10 towns were non-statutory in 1951-81. In other words, 89.2% of the present day statutory towns with origin in 1901-41 were of statutory origin. In contrast, only 4 towns out of the 12 statutory towns of 1981 Census with origin in the period 1951-81, were created statutorily for the first time. But, if the statutory status of the non-statutory towns and statutorily created towns are taken together, the post-independence days conferred urban civic bodies on 22 towns in 1951-81 period. Numerically, the scale weighs in favour of the British Raj in the conferment of statutory urban civic bodies on towns. One may examine if the British had any well defined policy to municipalize the towns as a matter of strategy in

confining the elitist educated section of the urban population to local politics, local issues and local problems and also if in independent West Bengal the policy of decentralization of civic power by creating appropriate urban civic bodies for the towns was not vigorously pursued.

In the pre-independence days the size of the towns did not seem at all to have been a factor in deciding if the towns would be statutory or not. The array of statutory towns in 1901-41 is impressive from the point of their distribution among all size classes. None of the towns upto Class III size was non-statutory. But, in 1951-81, only 8 towns, out of 14 of Class III size at the time of origin, were statutorily created. Whereas 33 towns out of the 35 of Class IV size were of statutory origin in 1901-41, two of the four towns of the same size in 1951-81, had a statutory birth. In the Class V category, 22 towns, out of the 30 created in 1901-41, were statutorily created, but in the post-independence period all the four towns were non-statutory in origin. In the pre-independence days all the Class VI towns were statutory, but in the post-independence period, one had a non-statutory origin.

The foregoing analysis does not attempt to hazard the guess that all the statutory towns created in 1901-41 were better managed than the ones created later. But, one can hardly escape the conclusion that the differentiation of an urban area from a rural one was largely made by the statutory urban civic administration in the period 1901-41. It is evident that the urban concept of 1961 Census, systematically applied till 1981, had been lacking in 1901-41, and, as a result, the number of non-statutory urban areas in the same period was minimal. But, this does not mean that the preponderance of non-statutory towns in the 1951-81 period, as evident from Table 2, had equipped the non-statutory urban areas with appropriate civic bodies to look after the amenities of the resident population. Rather, such non-statutory towns were saddled with rural institutions without the technical expertize and financial resource to solve the civic problems of their urban population. If urban population were different from the rural people in their socio-economic characteristics, the corollary is that the civic body of the former should also differ in character from that of the latter.

From the look at the evolution of non-statutory urban areas of 1981 Census in West Bengal during 1901-81 evident from Table 2,

one gets the impression that the pattern established by the British in favour of statutory towns, has been reversed. If the period 1901-41 saw the heyday of statutory towns, the period 1951-81 marked the high tide of non-statutory towns. During the British Raj only nine non-statutory towns, out of 186 of 1981 Census, were created. Thus, 95.2% of the non-statutory towns of 1981 had their birth in the period 1951-81. The number of non-statutory towns which had their origin as such was 19 in the pre-independence days, if 10 statutory towns with non-statutory origin in 1901-41 were taken into account. The number of such towns of non-statutory origin in post-independence period comes to 185, if the statutory towns of 1981 with non-statutory origin in the period following 1951, are grouped with these of non-statutory origin in the same period.

In the pre-independence period only two towns of Class IV origin, out of 52 statutory towns in the Classes I-IV, were non-statutory at the time of their birth, and two non-statutory towns—one of Class III and one of Class IV at the time of their births—have remained non-statutory even now. If in the post-independence period 58 non-statutory towns at the time of origin (one of Class II, six of Class III, and 51 of Class IV) have remained non-statutory, one may reasonably ask for the optimal size of a non-statutory town which may be viewed as the cut-off point for the constitution of statutory municipal organizations therein. The available statistics, however, fail to indicate any such direction.

In conclusion, we can say that the growth of statutory towns in West Bengal in post-independence period has been very slow, not influenced by the size of population in the town. If that were so, one would not have found two statutory towns of class VI size at the time of their creation nor would have one been faced with 60 non-statutory towns of the size of Class IV and above at the time of their origin. The continuance of rural institutions in non-statutory urban areas of different sizes indicates a problematic situation wherein a rural organization has to cope with urban problems. It is time that the concerned authorities examine the issues seriously and save the non-statutory urban areas from this anomalous situation.

Table 1
Origin and Development of the Statutory Towns of 1981 Census in West Bengal

No. of statutory by size class at the time of origin.

| | I | II | III | IV | V | VI | Total | Remarks |
|-------------------------|---|----|------------|--------------|--------------|----|-------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1901 | 2 | - | 14 | 30 | 19 | 9 | 74 | All Municipal |
| 1911 | - | - | - | 2 (1 NM) | 1 | - | 3 | Kharagpur was NM and was municipal in 1961 when of Class II size. |
| 1921 | - | - | 1 | 3 | 4 (3 NM) | - | 6 | Beldanga NM but municipal in 1981 when of Class IV size and Rampurhat and Bolpur both NM, but municipal in 1951 when both of Class IV size. |
| 1931 | - | - | 3 | | 4 (2 NM) | - | 5 | Kalimpong and Siliguri both of Class V size NM Siliguri M in 1951 when of Class III size & Kalimpong in 1951 when of Class V size was non-M but municipal in 1961 when of Class III size. |
| 1941 | - | - | - | 1 (NM) | 2 (NM) | 2 | 5 | Dubrajpur of Class IV NM. Municipal in 1981 when of Class III size. Bongaon of Class V NM and became M in 1961 when of Class III size & Sainthia of Class V NM became Municipal in 1981 when of Class III size. |
| Pre-Independence period | 2 | - | 15 | 35 (2 NM) | 30 (8 NM) | 11 | 93 | |
| 1951 | - | - | 3 (1NM) | 1 | - | - | 4 | Alipur Duar of Class III was NM and became Municipal in 1961 when of Class III size. |

Table 1 (continued)

| | I | II | III | IV | V | VI | Total | Remarks |
|------|---|----|-------------|----|-----------|-----------|-------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1961 | - | - | 4 (3 NM) | 1 | 2 (NM) | 1 (NM) | 8 | Habra and Ashoknagar were NM and became Municipal in 1981 when of Class II size-New Barrackpore of Class III size NM became Municipal in 1971 when of Class III size--Gayespur of Class IV NM became Municipal in 1981 when of Class III. Jadavpur of Class V was NM became Municipal in 1981 when of Class I size, Tarakeswar of Class V size NM became Municipal in 1981 when of Class IV and Kalyani of Class VI size NM became Municipal in 1971 when of Class IV size. |

| | | | | | | | |
|--------------------------------|---|---|--------------|--------------|---------------|--------------|-----|
| Post Independence period | - | - | 7 (4 NM) | 2 (1 NM) | 2 (NM) | 1 (NM) | 12 |
| Total | 2 | - | 22 (4 NM) | 37 (3 NM) | 32 (10 NM) | 12 (1 NM) | 105 |

Table 2**Origin and Development of Non-Statutory Towns of 1981 Census in West Bengal**

No. of non-statutory towns by size class at the time of origin

| | I | II | III | IV | V | VI | Total |
|-------------------------|---|----|-----|----|----|----|-------|
| 1901 | - | - | - | - | - | - | - |
| 1911 | - | - | - | - | - | - | - |
| 1921 | - | - | - | - | 1 | - | 1 |
| 1931 | - | - | 1 | 1 | 1 | 1 | 4 |
| 1941 | - | - | - | - | 4 | - | 4 |
| Pre-independence time | - | - | 1 | 1 | 6 | 1 | 9 |
| 1951 | - | - | - | 5 | 7 | 2 | 14 |
| 1961 | - | - | 4 | 15 | 24 | 5 | 48 |
| 1971 | - | - | 1 | 9 | 24 | 4 | 38 |
| 1981 | - | 1 | 1 | 22 | 38 | 15 | 77 |
| Post independence total | - | - | 6 | 51 | 93 | 26 | 177 |
| GRAND TOTAL | - | 1 | 7 | 52 | 99 | 27 | 186 |

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(2) Union Table A-IV-in Census of India. 1971, Series 22, West Bengal Part IIA, General Population Tables by Bhaskar Ghosh, pp. 148-167, Delhi, 1973.

(Note The opinion expressed in the this paper does not reflect the policy of the Govt. but conveys the personal views of the author.)

CONTRASTING URBANIZATION PATTERNS : WEST BENGAL AND PUNJAB – AN ANALYSIS

Nipa Ghosh

I Introduction

This is an attempt to compare and contrast the urban growth patterns of two Indian states—West Bengal and Punjab and to suggest some of the possible reasons behind their observable differences.

West Bengal is often considered as a one city state. Urban growth is concentrated in the city of Calcutta and to some extent in the neighbouring districts—Hooghly, Howrah and 24-Parganas. In contrast, in Punjab, no district has a disproportionately dominating position compared to others.

Here, first an attempt is made to statistically confirm the different trends of urbanization of the two states. Second, in an attempt to analyse such differences; effects of colonial rule, agricultural development and industrial development are considered.

India's recent rates of urban growth are not too poor—in fact the 1981 Census revealed a significant acceleration in the absolute number of urbanized population in the country. In the last decade, the increase has been particularly large—of about 50 million. The total urban population of India in 1981 was greater than the urban population of all other countries except China, the U.S.S.R. and the U.S.A. Hence, even though India's level of urbanization continues to be low and its rate of growth is not high by contemporary world standards, because of its sheer size it is important to understand the phenomenon of urbanization in India. However, given India's size and diversity, any discussion of urbanization would be incomplete without a regional perspective. Comparison of two states having different growth patterns help to throw some light on the country's urbanization process itself.

The key ideas underlying the concept 'urban' are (1) high density of population and (2) the dominance of non-agricultural pursuits. The census combines these two ideas and, settlements are classified as urban areas, if either,

(i) they have a municipality, corporation, cantonment, board, notified town area committee etc. or, —

(ii) they have (a) a minimum population of 5000, (b) a density of at least 400 people per sq km and (c) at least 75% of the male labour force is engaged in non-agricultural activities.

Urbanization, can be measured in a number of different ways. We shall examine changes in the proportion of population living in urban areas and also the growth of urban population itself. Change in urban population may be due to natural growth, immigration to the area and reclassification of rural areas into urban areas.

II West Bengal and Punjab—differences

According to the 1981 Census, the rural-urban composition of population of West Bengal and Punjab are similar. 26.49% of the population live in urban areas in West Bengal, whereas the figure is 27.72 % in case of Punjab.

In the process of urbanization, Punjab has come from behind and has overtaken West Bengal. The percentage of decadal variation in urban population has shown almost similar trend in West Bengal and Punjab upto 1971. Following the decades from 1911, both have received spurts and reached their highest growth rate during the decade 1931-41, with West Bengal having an edge over Punjab. A certain deceleration was noted in the decade 1941-51 followed by some signs of improvement in 1951-61, and a slight decline in 1961-71. The rate increased thereafter for both the states, though Punjab's rate of growth was now far greater than that of West Bengal. This sudden acceleration in the process of urbanization in Punjab could be due to the agricultural developments of Punjab, following the mid-sixties. We shall try to ascertain this in Part III (Table 1).

Such similarities in the growth trend could have prompted us to say that the urbanization processes have followed the same paths in the two states. However, the spatial distribution of urban population within the states indicates the opposite. Differences are most pronounced by the way in which West Bengal's urban population is concentrated in the city of Calcutta and the districts around it. The spatial distribution is extremely unequal, even if we exclude Calcutta from our measures. The distribution is unequal in two respects—(1) the degree of urbanization varies greatly among districts in West Bengal. (2) When cities are differentiated according to size classes, distribution of urban population is extremely biased in favour of the largest size class. In comparison, in Punjab, the

urbanization process is much more even.

Let us first try to estimate the degree of concentration of urban population of West Bengal in Calcutta and to compare it with Ludhiana, the city with the largest population in Punjab. We shall use three indicators for this purpose (1) the percentage of West Bengal urban population living in the Calcutta Municipal Corporation area, (2) the percentage of the West Bengal urban population living in the Calcutta Urban Agglomeration, and (3) the primacy ratio.

According to the 1981 Census, the urban population of West Bengal has reached the figure 14,433,486; whereas, the population of the Calcutta Municipal Corporation is 3,291,665 and that of the Calcutta Urban Agglomeration is 9,165,650. The urban population of Punjab is 4,620,495 and that of Ludhiana, the city having the largest population, is 606,250.

Therefore, the Calcutta Municipal Corporation accounts for 22.81% of the West Bengal urban population and the Calcutta Urban Agglomeration accounts for 63.5%, whereas Ludhiana contains 13.12% of Punjab's urban population. This speaks for the concentration of urban population in and around Calcutta.

We can determine the primacy ratio for Calcutta and Ludhiana. The primacy ratio is the ratio between the population of the largest city and the sum of the population of the next three largest cities or agglomerations (Table 2).

Therefore, the primacy ratio for Calcutta Urban Agglomeration is 10.11, compared to a much smaller primacy ratio for Ludhiana of 0.50.

The difference in primacy ratios tells that the concentration of people in Ludhiana is in no way comparable to the concentration in and around Calcutta. The 1981 Census also reveals that primacy ratio for Bombay was 2.26, while that for Madras was 1.76. Therefore, the primacy ratios for these two big cities are also nowhere near that of Calcutta. This further confirms the bias in the spatial distribution of the urban population in West Bengal (Tables 3 and 4).

Table 4 gives time series data for the percentage of the urban population in Calcutta. It is found that the percentage, though nowhere as low as in Ludhiana, is declining since independence. This declining trend may be due to the industrial stagnation of Calcutta, or it may be due to the fact that concentration of population in the metropolitan city, Calcutta, has reached its

saturation point, and a process of decentralization has started in the form of satellite towns at the periphery of the metropolitan area.

However, despite the decline in the rate of growth of Calcutta city itself, it still remains a glaring fact that West Bengal's spatial distribution of the urban population is extremely biased in favour of Calcutta and its environs. Calcutta's unusual importance can be explained by the effects of colonial rule. We shall try to do so in Part III.

Now, the question is whether such uneven distribution in West Bengal is solely due to the presence of the metropolitan city Calcutta? The answer is obviously 'no', as, even if we exclude Calcutta, the distribution does not seem to be even. To prove this, we shall first use district-wise data and show that interdistrict disparities in degrees of urbanization are relatively smaller in Punjab (Tables 5 & 6).

Here, the degree of urbanization is measured in terms of percentage of urban population to total population of the districts.

We calculate the coefficients of variations among districts. From Table 7 we can conclude that the variations in degrees of urbanization among districts are far greater in West Bengal than in Punjab, even if Calcutta district is excluded from our measurements.

The unevenness in distribution is prominent not only in case of interdistrict variations of urbanization in West Bengal, but also, in the case of the distribution of urban population among different size classes of cities. According to census definition cities can be differentiated into six size categories. Cities having population greater than or equal to 1,00,000 fall into size category I. Cities within the range 50,000 to 99,999, 20,000 to 49,999, 10,000 to 19,999, and 5,000 to 9,999 fall into size category II, III, IV and V respectively. Cities with a population less than 5,000 belongs to size Class VI.

Table 8 reveals that West Bengal's urban population distribution is much more biased to the largest city size group than Punjab's.

Even if we exclude the population of Calcutta Municipal Corporation, city size I's share in total the urban population amounts to 70%, which is a far higher figure than Punjab's 46%. In the case of all other city size classes, their share in the state's total urban population is greater in Punjab than in West Bengal. We can conclude that the urban population is distributed in the two states in

Figure 1

'LORENZ CURVES' for showing concentration of urban population over different city-size classes

West Bengal and Punjab

1981

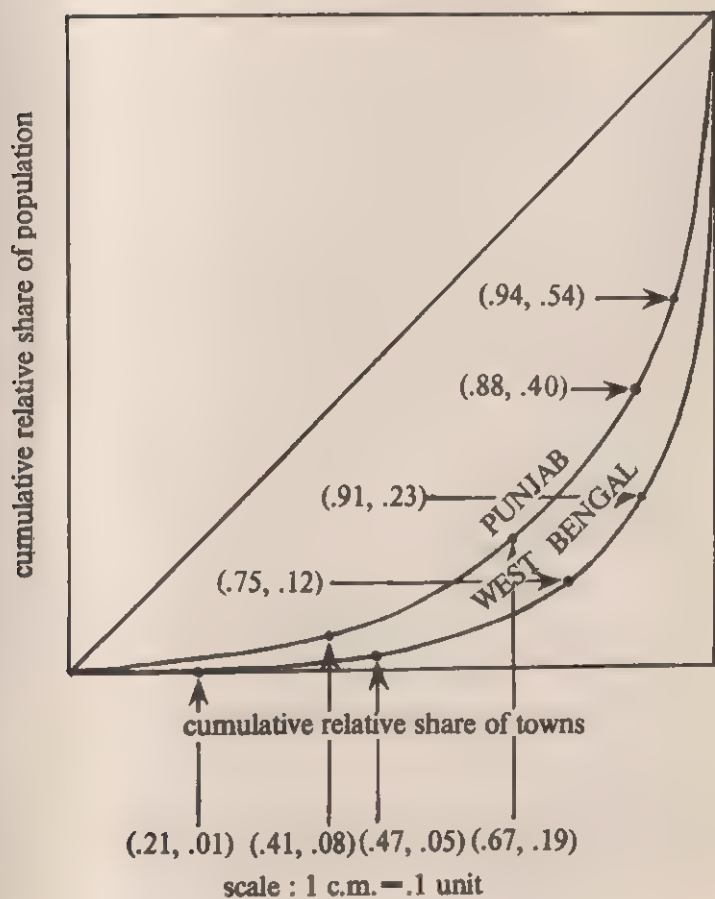


Figure 2

**'LORENZ CURVES' for showing concentration of
urban population over different city-size classes
West Bengal and Punjab
1951**

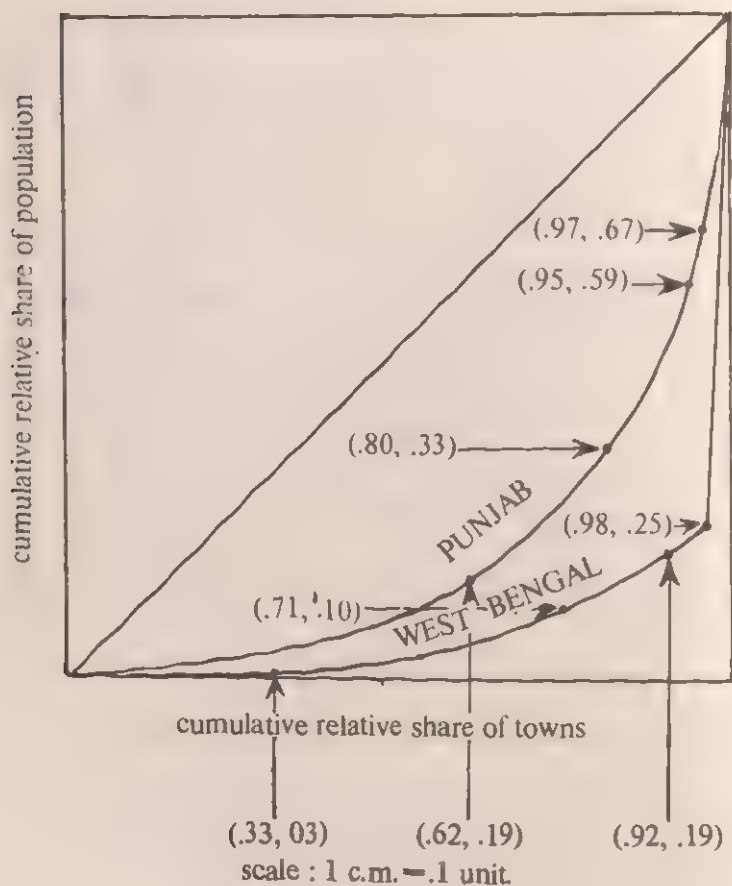


Figure 3

'LORENZ CURVES' for showing concentration of
urban population over different city-size classes
West Bengal and Punjab
1961

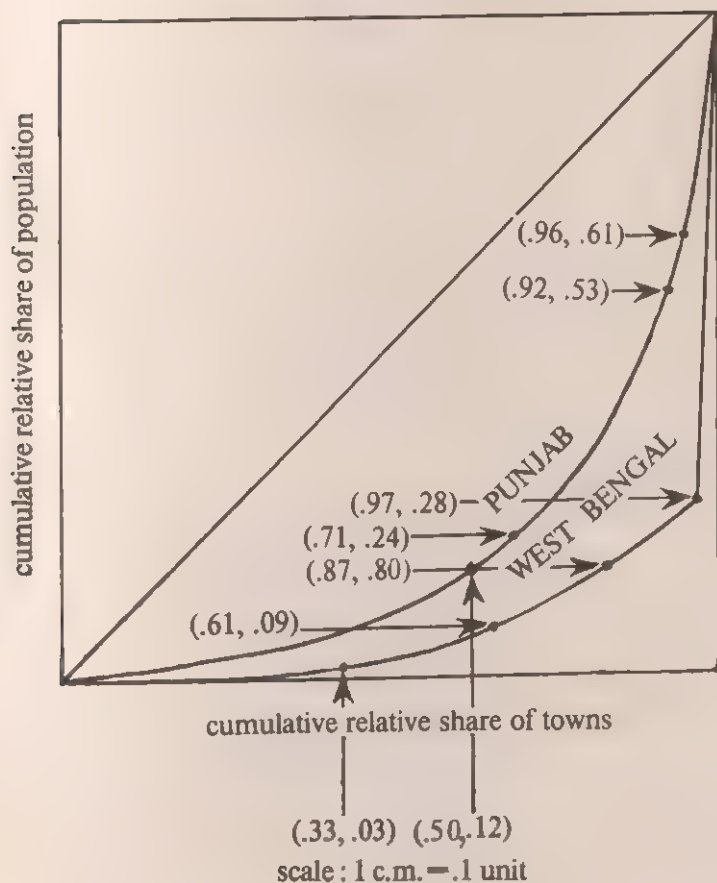


Figure 4

'LORENZ CURVES' for showing concentration of
urban population over different city-size classes
West Bengal and Punjab
1971

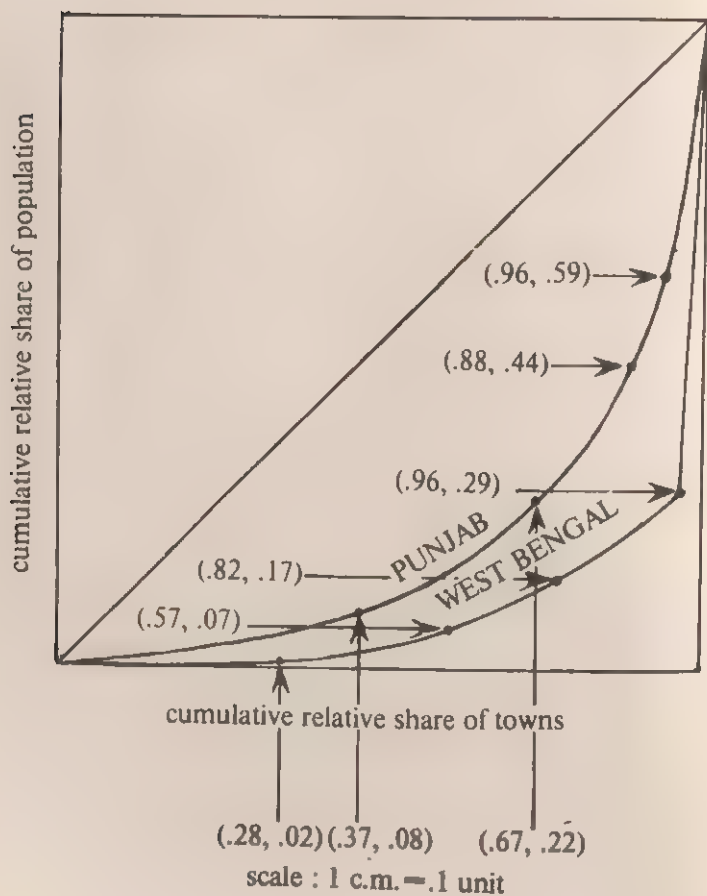
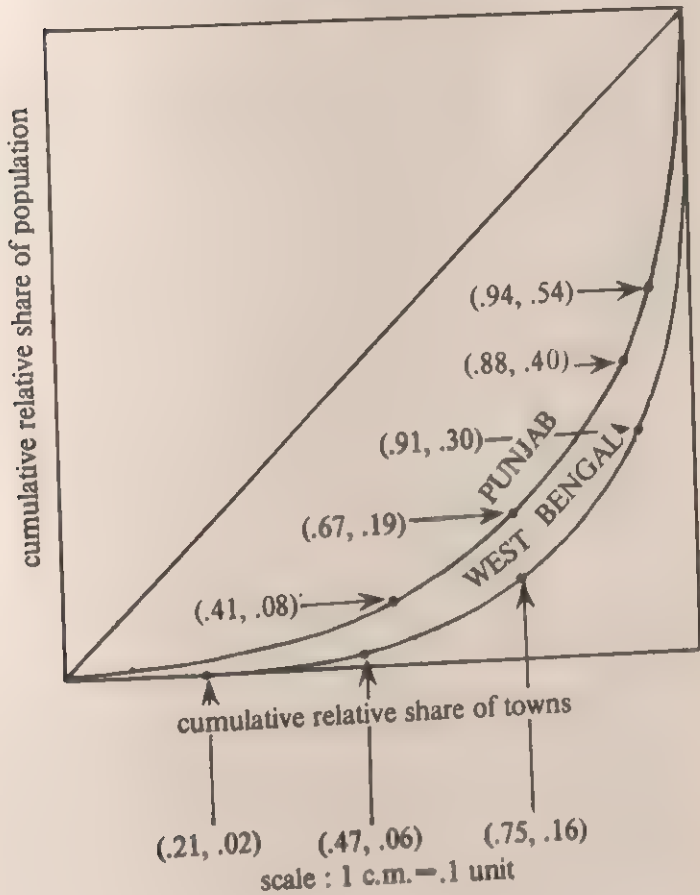


Figure 5

'LORENZ CURVES' for showing concentration of urban population over different city-size classes
West Bengal (excluding Calcutta M.C.) and Punjab
1981



a different manner. In West Bengal the largest size class has a disproportionate share of urban population, whereas in Punjab a greater share is accounted for by the smaller cities.

City-Size

City-size distribution reflects on the structural aspect of the urban system—how the urban population is organized. To check whether the size class distribution of towns is highly skewed or not, we will use Lorenz curve or curve of concentration and show the deviations of the two states from the line of equal distribution. Let P_x denote, less than type cumulative relative share of cities upto X th size class and Q_x denote less than type cumulative relative share of total urban population upto X th size class. Naturally, both P_x and Q_x vary from 0 to 1. The curve obtained by plotting P_x against Q_x for different fixed values of X is the curve of concentration or Lorenz curve. The line $P_x = Q_x$ is the line of equal distribution and it indicates that any specified proportion of cities contains precisely the same proportion of the total urban population. The more the departure of the Lorenz curve from the line of equal distribution, the greater is the concentration of total urban population in a few cities. Table 9 shows the calculations for drawing the Lorenz curves.

In Fig. 1, we have plotted Lorenz curve for West Bengal and Punjab, both for 1981. Deviations from the line of equal distribution reveals that Punjab's urban population is much more equitably distributed among the towns than that of West Bengal. The area of concentration is greater for West Bengal than for Punjab.

In Figs. 2, 3 and 4 we have plotted Lorenz curves for West Bengal and Punjab for 1951, 1961 and 1971 respectively, and have found that inequalities in size distribution have been consistently higher in West Bengal, compared to Punjab over all these years.

In Fig. 5, we compare the patterns of city size distribution of West Bengal and Punjab, excluding the population of Calcutta Municipal Corporation for 1981. This, too, confirms that the inequalities are much more pronounced in case of West Bengal than in Punjab.

III Explanation

The previous section has proved beyond doubt that West Bengal's urban population is highly concentrated in and around Calcutta. However, Table 4 also makes it clear that, since independence, there has been a declining trend in the percentage of West Bengal's urban population in Calcutta Municipal Corporation and in the Calcutta

Urban Agglomeration.

There's a problem associated with the measurement of urban growth of big cities. The boundaries of large cities are extended as they grow. Thus, the population of 1981 may, for example be for an area much larger than that covered in 1971. When proper definitional adjustments are made for Calcutta, to take this difficulty into account, Calcutta Metropolitan Area's growth in the past decade might appear to be less impressive than what the figures suggest.

Table 10 defines Calcutta Urban Agglomeration's growth rates. When we ignore the effects due to changes in area, it indicates a spurt in the last decade.

When we check closely, we find, that in 1981, 22 more new towns were included in the Calcutta Urban Agglomeration, which were listed separately in 1971; their total population being about 4,00,000 in 1971 and about 5,00,000 in 1981. Thus with the 1971 definition of Calcutta Urban Agglomeration, the corrected 1981 population for Calcutta would be about 8.6 million, which would indicate a growth rate of just over 2% a year—a rate similar to the 1961-1971 growth rate. Alternatively, if the 1981 definition is taken, the 1971 population would be about 7.45 million and the growth rate would be about 2.1% per year. Despite the dislocations caused in Bengal at the time of partition and later in 1971 because of the Bangladesh war, the rate of growth of Calcutta has been consistently low and nearly at par with the growth rate of population of the country as a whole, i.e. not very different from the natural population growth rate, when definitional adjustments are accounted for (Table 11).

Looking at the hinterland of Calcutta, and defining it in such a way so as to include all towns with a 20,000 or more population in 1971 within a radius of about 100 km straight line distance of the city, the population of the hinterland was 13.77 lakhs in 1981. The hinterland showed an annual growth rate of 3.04% which far exceeded the growth rate of Calcutta Urban Agglomeration.

We shall try to trace the origin of West Bengal's heavily biased urban growth back to the colonial era. Colonial rule leads to the orientation of urban growth to a few selected export-oriented trading centres accessible by way of water transport, this being the easiest mode of transportation at the time. This led to the preference given to river ports, particularly Calcutta.

The orientation of the development process in Calcutta was such

that it could not spill over to the surrounding regions of Bengal. While Calcutta port was linked to other parts of India for carrying primary products for export, the other areas of Bengal were not interconnected among themselves. According to Bhattacharya¹ there were also several institutional constraints on the growth of home markets, e.g. transit duties or inland customs duties which gave preference to foreign goods in the home market over the produce of native industry. Further, though each time goods underwent a change of form (e.g. raw material through various stages into goods for final consumption) a duty was payable, the foreign imports were granted a waiver. The duties imposed effectively constricted commerce conducted by Indians, offered differential advantage to foreign imports, discouraged regional specialization, and greatly influenced the location of trading centres and trade routes. All these led to the development of Calcutta at the expense of the surrounding regions, often at the expense of the erstwhile prominent urban centres; which suffered from population decline or stagnation, e.g. Murshidabad, Dacca, Patna or Burdwan.

'The population of Dacca was estimated to be 1,50,000 in 1815 by Walter Hamilton; but by the time of the next survey in 1830 by the Magistrate of Dacca, the population declined to 66,989. The population stagnated between 1830 and 1872 when the population was 68,595. Murshidabad too experienced a precipitate decline; in 1815 its population was estimated to be 1,65,000, in 1829 about 1,46,000, in 1837 about 1,24,800 and in 1872, at the time of the first census about 24,500.'²

'The decline of the cities of Murshidabad and Dacca was the subject of much comment in the nineteenth century. Magistrate Walters attributed it in 1830 to the reduction of the investments in Dacca textiles. He also used Dacca custom house records to show reduction in values exported. Both at Dacca and at Murshidabad, the decline of the old nobility meant a gradual atrophy of the urban luxury industries. The shift of the administrative centre of gravity to Calcutta, the removal of the superior court (Sadar Adalat) from Murshidabad to Calcutta, the closure of the mint, the migration of artisans, and the shifting of river course – these were some of the factors in the decay of Murshidabad. On the other hand, the city of Calcutta grew rapidly, from 180,000 to 230,000 in 1821-22 and then to 4,28,000 in 1872.'³

Colonial rule stood in the way of transmitting the impetus of growth throughout Bengal, and gave rise to the concentration of

urban population in favour of Calcutta. While in Punjab also, the regional orientation of urban growth in the colonial era was towards Amritsar and Lahore, which were the administrative centres of undivided Punjab,⁴ there could be no comparison with Bengal, Calcutta being the leading port and the capital of India.

However, the influence of colonial rule cannot explain the persistence of such bias in West Bengal and a development in the radically opposite direction in the case of Punjab by way of the growth of large number of small towns distributed evenly all over the state, in the post-independence period. While this difference can be attributed to many factors, here we shall try to explain, the relatively even distribution of the urban population in Punjab in terms of developments in the agricultural field.

Urbanization through agricultural development and urbanization through industrialization manifest themselves in two different patterns. Increase in agricultural productivity, with increasing marketable surplus and commercialization of agriculture results in a growth of small towns with restricted hinterlands. Then comes the secondary stage of development. Agricultural development leads to the development of agro-based industries. It provides new stimulus to the process of urbanization. Agricultural market towns become centres for collection of agricultural raw materials on which the industry is based. This addition of the agro-based industry to the agricultural market in turn encourages new trade and service activities. All these provide the stimulus behind the well-sustained acceleration in the growth of the towns.

Punjab is the state where agriculture has made most commendable progress over the past three decades. In our study, we shall emphasize mostly on the decades of green revolution 1961-1971 and 1971-81.

Tables 12 and 13 give the relative rates of growth of total and agricultural incomes in the Punjab since 1960-61, which is remarkable. Some short term fluctuations in the growth performance notwithstanding, the Punjab economy has been able to maintain a very high growth rate of 5.18% during the period 1960-61 to 1977-78, where the national growth rate was only 3.40% per annum. During the same period per capita income in Punjab rose at a compound annual rate of 3.17 compared with only 1.21% for India.

Another special feature for the agricultural development of Punjab is that the improvements were evenly distributed over the

districts. Initially, there were indeed differences in the application of high yielding varieties of seeds and other associated inputs and in crop yields. But, since Punjab's agricultural progress has started earlier than anywhere else in India, thus gaining much greater momentum its backward regions lost no time to seize the opportunity to overcome the initial hurdles and catch up with the progressive regions (Table 14).

In Table 14 we find that the mean exponential annual rate of growth of agricultural output for all the districts of Punjab is 7.79 and that of West Bengal is 2.54. The co-efficient of variation among districts in Punjab is 0.10 and that of West Bengal is 0.43. Therefore, we can say, Punjab's rate of progress is far greater and far more equitable than West Bengal's.

In another study,⁵ covering the same time period as in Table 14, the districts of West Bengal and Punjab are arranged according to their compound annual percentage growth of agricultural output. In eight of Punjab's districts show a growth rate of above 7.3%, and three of its districts fall into the category of 6.0 to 7.3% growth rate. In contrast, in West Bengal, four of its districts show a growth rate varying from 3.0 to 4.5%, eight fall into the category of 1.5 to 3.0%, one into 0 to 1.5% and one showed a negative rate of growth.

In a study by Chaddha and Bhalla,⁶ the Punjab state was divided into three regions depending on soil type, cropping pattern, structure of irrigation etc.

1. The central region consisted of the districts of Amritsar, Jullandhar, Kapurthala, Ludhiana and Patiala.
2. The south western region consisted of the districts of Ferozepur, Faridkot, Bhatinda and Sangrur.
3. The semi-hilly region consisted of the districts of Hoshiarpur, Rupnagar and Gurdaspur.

Taking these regions as the bases we can calculate a very high correlation co-efficient (0.93) between urbanization and agricultural productivity from Table 15. Bhalla and Chaddha describe the process of urbanization in Punjab and relate it to agricultural activities, thus we can divide the transformation in Punjab into a definite sequence of three phases. The first phase covers the pre-independence period. The second phase, covering the whole of the fifties, is characterized by a twin policy of land reform and creation of large agricultural infrastructure through massive doses of public investment. The legislation on abolition of intermediaries, ceilings on

land holdings, protection of tenants and consolidation of holdings were passed during the mid fifties. Simultaneously, the most important hydro-electric project—Bhakra-Nangal was completed during this period and firm steps were taken to strengthen co-operative credit machinery and lay the foundations of agricultural research and extension. The third stage, covering the sixties and the seventies, witnessed adoption of selective area approach, mechanization of irrigation, increasing use of chemical fertilizers and a break through in agricultural research resulting in the introduction of highly productive agricultural technology deriving unprecedented growth particularly in wheat output.

According to Gosal, during the decade 1951 to 1961, urban population of Punjab increased by 29.06%, a relatively low growth rate compared to the figure for earlier decades. A number of reasons can be advanced for this. The partition had its impact on urban growth; there was general decrease in urban population in the border areas, e.g. Gurdaspur and Amritsar districts. Here, not only was the growth in many towns way below the rate of natural increase, but the number of urban places also declined. Even during this period, the regions which showed an accelerating trend were predominantly agricultural.⁷ This helps us to establish the fact that Punjab's urbanization has been based mainly on agricultural development.

Gosal says, the highest percentage increase in urban population took place in the cash-crop farming regions comprising parts of Ferozepur and Bhatinda districts. In this tract, the population of towns belonging to small and medium size categories increased by more than 50%, those with an increase of less than 20% were few. In such a phenomenal growth of urban population, the role of immigration is evident. Most of these fast-growing towns are situated along the Ferozepur-Delhi rail route. There are others which are situated along branch rail lines converging on Bhatinda which is the most important railway junction on the main rail route leading to Delhi, and also the regional centre of this agriculturally prosperous region. The rapid growth of these towns is the result of increasing commercial farming which has stimulated the further development of commercial activities and processing industries based on local cash crops, particularly cotton, oilseeds and wheat. With the chief cotton growing areas left in West Pakistan, this is the region where the acreage under cotton increased considerably during these ten years, particularly under long staple cotton. The increasing stimulus

to growing commercialization also came from the increased irrigational capacities of the old canals and the extension of the new Bhakra canals and its branches during the decade. As is evident from their names, most of the towns here were primarily agricultural markets (mandis) : Jakhal Mandi, Rampura Phul Mandi, Jaitu Mandi, Abohar Mandi etc.

The process of urbanization was extremely slow in the foot-hill zone of Ropar, Hoshiarpur and Gurdaspur districts. Lack of potentialities of irrigation development and continuous soil and gully erosion kept the zone from making comparable progress in agriculture, which in turn stalled urban progress.

The years 1961 to 1971 was the decade of green revolution and new economic prosperity in Punjab. The percentage of net area sown of total area increased from 75 to 81. Likewise the proportion of area sown more than once improved from 26% in 1961 to about 40% in 1971. The percentage of net area irrigated to net area sown shot up from 54% to 72% during 1961 to 1971. While the average yields per hectare of wheat and rice were doubled during these years, those of cotton increased by 50%. There was a significant rise in market arrivals of agricultural produce, particularly of wheat and rice. With these outstanding achievements Punjab was at the top among the states in agricultural development. However the impact of this progress in agriculture became more evident in the process of urbanization in the next decade. Two reasons can be advanced for this delayed impact : one, the time taken by industries based on agriculture to emerge; and, two, urbanization process received a jolt in the border state of Punjab due to the war against Pakistan in 1965. However, agriculturally prosperous areas in the Western Malwa tract nearly maintained their rate of growth. Khanna and Sirhind, both major agricultural markets and centres of processing industries, secured a growth rate of 42.6% and 87.6%, respectively, during this period.

In terms of agricultural development, Punjab made further strides during the decade 1971-81; net area sown increased from 81% to 83% of the total area; the proportion of area sown more than once improved from 40% to 56%, the net area sown receiving irrigation increased from 72% to 85%. During this period, rice acreage was more than doubled while the yield of rice per hectare increased from about 2,000 kilograms to 2,800 kilograms. Likewise, wheat acreage increased from 2.5 million hectares to 2.8 million hectares and the yield per hectare improved from about 2,400

kilograms to 2,700 kilograms. The area under cotton increased from 2,46,000 hectares to 4,60,000 hectares. These figures indicate that, like the preceeding ten years (1961-71), the decade 1971-81 had been one of outstanding achievements in the sphere of agricultural development in the state. These achievements made their impact on the pace of urbanization by accelerating commercial activities and the development of agro-based industries.

There was a visible acceleration in the process of urbanization in the agriculturally affluent tract of western Malwa comprising parts of Ferozepur, Bhatinda and Faridkot districts. Practically all the towns along the rail routes converging to Bhatinda experienced more than 30% growth of population. With population rising to 1,27,450 by 1981, registering a phenomenal growth rate of 95.12% during 1971-81, and with the coming up of the thermal plant, the fertilizer plant and industrial activity based on cotton, oilseeds etc. Bhatinda became the first city and a distinctly emerging regional centre of this tract. Abohar (85,187) and Moga (80,548) came close to the status of cities. Their population increased by about 45% and 31% respectively. In Faridkot (42,400) and Malout (40,343) the decennial growth was above 50%. In Zira town (19,343), the population was more than doubled during 1971 to 1981. Thus in most of the towns in this tract, which are largely agricultural markets, there were relative quickening in the process of urbanization consequent upon the green revolution since the late sixties which gave rise to increased commercial activity and also stimulated the development of agro-based industries.

In Punjab, 11.17% of the urban working force is still engaged in agriculture (5.45% as cultivators and 5.72% as agricultural labourers) according to 1981 Census. It is largely because of the fact that an overwhelming majority of the towns and cities in the state have grown from rural background and some remnants of that background are still surviving and that several of the small towns still look like overgrown villages.⁸

This is not to deny the role of industrial development in Punjab's urbanization. Industries too played an important role, but a role altogether different from that played by agriculture. As Gosal says, during 1951-61, a large number of towns grew at a fast rate along the Delhi-Amritsar main rail route, due largely to the expansion of industries, commercial and allied activities. In the Rajapura township, Gobind Garh, Khanna, Dohara, Ludhiana and Phagwara towns, the population increased by more than 50%. In Jullandhar

city, the growth was between 30 and 40%. With unprecedented expansion in a number of industries, Ludhiana became the chief manufacturing centre of the state. During the decade 1961 to 1971 also, rapid industry-based urban growth was seen along the rail route connecting Amritsar and Delhi. Many of the industrial towns which experienced more than 40% increase in their population in the decade, were located along this route. They include Ludhiana urban agglomeration (63%), Phagwara urban agglomeration (45%) and Rajapara township (51.8%).⁵

Therefore, we find that while industrial development has led to the growth of big cities in Punjab along particular transport routes, agricultural development has led to the growth of small towns spread all over the state. The relative evenness in Punjab's spatial distribution of urban population is therefore largely attributable to this spatial uniformity of agricultural development.

On the contrary, we can attribute West Bengal's urbanization mainly to its industrial development. The five most industrialised districts—Howrah, 24-Parganas, Hooghly, Burdwan, Darjeeling (if we include tea plantation as an industry) are also the five most urbanized districts (Table 16).

To quote Bagchi, 'Industrialisation based on capital has a tendency to produce uneven development between regions within a country. Once growth along capitalist lines begins to take place in particular regions, and particular locations, they tend to attract resources away from other regions. Capital gravitates there and a local capital market springs up, growth of certain industries creates demand for consumer goods through the familiar multiplier effects. Public funds and, more rarely, private are devoted to the creation of various types of infrastructure facilities such as roads, ports, railway lines, hospitals, power stations and educational institutions. The growing regions tends to attract capital, skilled labour, enterprising persons from other regions. They tend naturally to have adverse effects on the latter region.'¹⁰

Industrial towns in India have mostly followed the above-mentioned pattern. They stand as highly populated, advanced industrial centres in regions marked by under-development and usually do not show signs of spreading the impetus of development. 'In fact the story of spread effect overcoming backwash effect and an eventual equalisation between advanced and backward regions has remained a fairy-tale in the context of third world countries,' remarks Bagchi.

IV Conclusion

West Bengal and Punjab, the two Indian states, at barely the same level of urbanization have shown radically opposite spatial distribution of urban population. West Bengal is a mononuclear region, with high concentration of urban population in and around Calcutta. Punjab has grown into a multinuclear region with a large number of urban centres, none of them having a disproportionately dominating position compared to others.

The existence of the metropolitan city of Calcutta is not the sole reason for this bias in urban settlements of West Bengal. Even when we exclude Calcutta city, West Bengal shows highly unequal distribution of urban population among districts and among different size classes of cities. In contrast, Punjab shows an equitable spatial distribution.

Growth patterns of Calcutta city can be explained to a great extent by the effects of colonial rule and industrial development. Similarly, urbanization patterns of Punjab can be better explained in the light of its agricultural development. The differing effects of agriculture and industry in the urbanization process of a region are visible in these two states. Industrialization leads to the emergence of large cities or metropolitan areas mostly along major routes of transport and at locationally viable points, leading to a corridor development. In contrast agricultural development, with increasing degree of commercialization, supported by agro-based industries, generally leads to dispersion of towns with low inter-town disparities located in a multinuclear territory.

Table 1

**Percentage decadal variation of urban population of
West Bengal and Punjab**

| Decade | West Bengal | Punjab |
|---------|-------------|--------|
| 1901-11 | 13.70 | -13.00 |
| 1911-21 | 7.16 | 6.92 |
| 1921-31 | 15.01 | 34.37 |
| 1931-41 | 63.69 | 41.85 |
| 1941-51 | 32.52 | 20.02 |
| 1951-61 | 35.97 | 29.06 |
| 1961-71 | 28.41 | 25.27 |
| 1971-81 | 31.61 | 43.66 |

Source : Census of India, 1981, *Series-1-Paper 2 Provisional Population Totals*, Delhi 1983.

Table 2

Population 1981

| West Bengal | | Punjab | |
|---------------|-----------|--------------|---------|
| Calcutta U.A. | 9,165,650 | Ludhiana | 606,250 |
| Asansol U.A. | 365,371 | Amritsar | 589,229 |
| Durgapur | 305,838 | Jullandhar | 405,709 |
| Kharagpur | 234,931 | Patiala U.A. | 205,849 |

Source : Census of India-1981. *Provisional Population Totals Series-1, Paper 2*, Delhi 1983.

Table 3

**Urban Population in West Bengal, Calcutta U.A. and
Calcutta M.C.**

| Year | West Bengal | Calcutta U.A. | Calcutta M.C. |
|------|-------------|---------------|---------------|
| 1901 | 2,066,550 | 1,488,323 | 933,754 |
| 1911 | 2,349,608 | 1,718,426 | 1,016,445 |
| 1921 | 2,517,874 | 1,850,650 | 1,053,334 |
| 1931 | 2,895,867 | 2,105,708 | 1,221,210 |
| 1941 | 4,740,222 | 3,577,789 | 2,167,485 |
| 1951 | 6,281,642 | 4,588,910 | 2,698,494 |
| 1961 | 8,540,842 | 5,736,697 | 2,927,289 |
| 1971 | 10,967,033 | 7,031,382 | 3,148,746 |
| 1981 | 14,433,486 | 9,165,650 | 3,291,665 |

Source : Census of India-1981. *Provisional Population Totals Series-1, Paper 2, Delhi-1983.*

Table 4

**Percentage of West Bengal urban population in Calcutta
U.A. and Calcutta M.C.**

| Year | Calcutta U.A. | Calcutta M.C. |
|------|---------------|---------------|
| 1901 | 70.02 | 45.18 |
| 1911 | 73.13 | 43.26 |
| 1921 | 73.50 | 41.83 |
| 1931 | 72.71 | 42.17 |
| 1941 | 75.47 | 45.72 |
| 1951 | 73.05 | 42.96 |
| 1961 | 67.16 | 34.27 |
| 1971 | 64.11 | 28.71 |
| 1981 | 63.50 | 22.81 |

Source : Table 4 is derived from Table 3.

Table 5

Percentage of urban to total population in different
districts of West Bengal

| Districts | 1961 | 1971 | 1981 |
|-------------------|-------|-------|-------|
| 1. Cooch Behar | 7.01 | 6.83 | 6.91 |
| 2. Jalpaiguri | 9.11 | 9.60 | 14.08 |
| 3. Darjeeling | 23.16 | 23.05 | 27.86 |
| 4. West Dinajpore | 7.48 | 9.34 | 11.14 |
| 5. Malda | 4.16 | 4.22 | 4.78 |
| 6. Murshidabad | 8.54 | 8.43 | 9.30 |
| 7. Nadia | 18.41 | 18.80 | 21.44 |
| 8. 24-Parganas | 31.81 | 35.15 | 38.90 |
| 9. Howrah | 40.48 | 41.93 | 45.22 |
| 10. Hooghly | 25.96 | 26.47 | 29.54 |
| 11. Midnapore | 7.70 | 7.63 | 8.54 |
| 12. Bankura | 7.34 | 7.47 | 7.63 |
| 13. Purulia | 6.80 | 8.26 | 9.00 |
| 14. Burdwan | 18.20 | 22.78 | 29.65 |
| 15. Birbhum | 6.97 | 7.03 | 8.33 |

Source : Census of India 1981, *Paper 1 of 1981 supplement, Series-23 Provisional Population Totals*, Delhi 1983.

Table 6

Percentage of urban to total population in different
districts of Punjab

| Districts | 1971 | 1981 |
|---------------|-------|-------|
| 1. Gurdaspur | 20.26 | 21.67 |
| 2. Amritsar | 29.17 | 32.94 |
| 3. Ferozepur | 22.16 | 22.54 |
| 4. Ludhiana | 34.79 | 42.12 |
| 5. Jullandhar | 30.06 | 35.42 |
| 6. Kapurthala | 23.21 | 29.69 |
| 7. Hoshiarpur | 12.10 | 14.56 |
| 8. Rupnagar | 15.04 | 21.89 |
| 9. Patiala | 26.12 | 29.61 |
| 10. Sangrur | 20.31 | 22.88 |
| 11. Bhatinda | 17.78 | 22.79 |
| 12. Faridkot | 19.75 | 24.03 |

Source : Census of India 1981, *Paper 1 of 1981 supplement, Series-23, Provisional Population Totals*, Delhi 1983.

Table 7

**Co-efficient of variation among districts (excluding
Calcutta City)**

| | 1961 | 1971 | 1981 |
|-------------|------|------|------|
| West Bengal | 0.71 | 0.71 | 0.69 |
| Punjab | N.A. | 0.27 | 0.27 |

Source : Calculated on the basis of Table 5 and Table 6.

Table 8

**Percentage of population in each city size class to total
urban population (excluding Calcutta city).**

| Size Class | West Bengal | | Punjab | |
|------------|-------------|-------|--------|-------|
| | 1981 | 1971 | 1981 | 1971 |
| I-VI | 100 | 100 | 100 | 100 |
| I | 76.84 | 70.98 | 46.40 | 40.62 |
| II | 10.78 | 11.85 | 13.28 | 15.68 |
| III | 7.71 | 9.63 | 21.31 | 21.74 |
| IV | 3.46 | 4.97 | 11.07 | 13.78 |
| V | 1.05 | 2.45 | 6.72 | 7.00 |
| VI | 0.16 | 0.12 | 1.22 | 1.18 |

Source : Census of India, 1981 : *Series-1 Provisional Population Totals*, Delhi 1983.

Table 9

Calculations for drawing the Lorenz curve

| Size Class (population) | Cumulative (less than type) relative share of towns (West Bengal.). | | | |
|----------------------------|--|------|------|------|
| | 1951 | 1961 | 1971 | 1981 |
| - 9,999 | 0.33 | 0.33 | 0.28 | 0.21 |
| 10,000-19,999 | 0.71 | 0.61 | 0.57 | 0.47 |
| 20,000-49,999 | 0.92 | 0.87 | 0.82 | 0.75 |
| 50,000-99,999 | 0.98 | 0.97 | 0.96 | 0.91 |
| 1000,000- | 1.00 | 1.00 | 1.00 | 1.00 |

Table 9 (Continued)

| Size Class (population) | Cumulative (less than type) relative share of population (West Bengal). | | | |
|----------------------------|--|------|--|------|
| | 1951 | 1961 | 1971 | 1981 |
| - 9,999 | 0.03 | 0.03 | 0.02 | 0.01 |
| 10,000-19,999 | 0.10 | 0.09 | 0.07 | 0.05 |
| 20,000-49,999 | 0.19 | 0.20 | 0.17 | 0.12 |
| 50,000-99,999 | 0.25 | 0.28 | 0.29 | 0.23 |
| 100,000- | 1.00 | 1.00 | 1.00 | 1.00 |
| Size Class (population) | Cumulative relative share of towns in 1981 (West Bengal exclud- ing Calcutta M.C.). | | Cumulative relative share of population in 1981 (West Ben- gal excluding Cal- cutta M.C.). | |
| - 9,999 | 0.21 | | 0.02 | |
| 10,000-19,999 | 0.47 | | 0.06 | |
| 20,000-49,999 | 0.45 | | 0.16 | |
| 50,000-99,999 | 0.91 | | 0.30 | |
| 100,000- | 1.00 | | 1.00 | |
| Size Class (population) | Cumulative (less than) relative share of towns (Punjab) | | | |
| | 1951 | 1961 | 1971 | 1981 |
| - 9,999 | 0.62 | 0.50 | 0.37 | 0.41 |
| 10,000-19,999 | 0.80 | 0.71 | 0.67 | 0.67 |
| 20,000-49,999 | 0.95 | 0.92 | 0.88 | 0.88 |
| 50,000-99,999 | 0.97 | 0.96 | 0.96 | 0.94 |
| 100,000- | 1.00 | 1.00 | 1.00 | 1.00 |
| Size Class (population) | Cumulative (less than) relative share of popu- lation (Punjab). | | | |
| | 1951 | 1961 | 1971 | 1981 |
| - 9,000 | 0.19 | 0.12 | 0.08 | 0.08 |
| 10,000-19,999 | 0.33 | 0.24 | 0.22 | 0.19 |
| 20,000-49,999 | 0.59 | 0.53 | 0.44 | 0.40 |
| 50,000-99,999 | 0.67 | 0.61 | 0.59 | 0.54 |
| 100,000- | 1.00 | 1.00 | 1.00 | 1.00 |

Source : Based on Census of India 1981, *Series-1 Provisional Population Totals*, Delhi, 1983.

Table 10
Calcutta Urban Agglomeration Population growth in
1971, 1981

| Year | Population | Decadal growth rate in percentage | |
|------|------------|-----------------------------------|-----------|
| 1971 | 7,031,382 | 1961-1971 | 1971-1981 |
| 1981 | 9,165,650 | 22.57 | 30.35 |

Source : Census of India 1981. *Series-1. Paper 2 Provisional Population Totals*, Delhi, 1983.

Table 11
Calcutta—Annual growth rates (% per year)

| 1951-1961 | 1961-1971 | 1971-1981 |
|-----------|-----------|-----------|
| 2.26 | 2.05 | 2.69 |

Source : Census of India, 1981, *Series-1, Paper 2 Provisional Population Totals*, Delhi, 1983.

Table 12
Punjab performance in agriculture output, net state
domestic product, per capita income (1960-61) prices

| Year | Agricultural output | Net state domestic product | Per capita income |
|---------|---------------------|----------------------------|-------------------|
| 1960-61 | 188.52 | 403.77 | 366 |
| 1965-66 | 198.35 | 482.53 | 396 |
| 1970-71 | 276.73 | 665.73 | 496 |
| 1971-72 | 276.49 | 680.34 | 497 |
| 1972-73 | 271.39 | 701.62 | 503 |
| 1973-74 | 281.31 | 737.88 | 519 |
| 1974-75 | 295.55 | 756.61 | 522 |
| 1975-76 | 303.65 | 815.17 | 551 |
| 1976-77 | 312.26 | 884.60 | 586 |
| 1977-78 | 336.73 | 951.03 | 618 |

Source : G. S. Bhalla and G. K. Chaddha, *Structural changes in Income Distribution A Study of the Impact of Green Revolution in Punjab*, op. cit.

Table 13

Expansion of crop yields in Punjab and India

Growth rate (compound).

| Crop | Punjab | | India | |
|---|---------------|---------------|---------------|---------------|
| | 1950-51 | 1965-66 | 1950-51 | 1965-66 |
| | to 1965-66 | to 1977-78 | to 1965-66 | to 1977-78 |
| Rice | 1.65 | 7.87 | 2.25 | 2.45 |
| Wheat | 3.01 | 5.03 | 1.88 | 4.50 |
| Maize | 6.55 | 0.00 | 4.00 | 0.55 |
| Bajra | 2.86 | 4.76 | 1.39 | 2.54 |
| Gram | 1.70 | 1.05 | 0.85 | 2.06 |
| Sugarcane | 1.00 | 4.47 | 1.75 | 1.86 |
| Groundnut | 4.90 | -1.95 | -1.05 | 1.54 |
| Mustard | 0.44 | 1.46 | 1.35 | 0.45 |
| Cotton | 1.70 | 1.40 | 1.55 | 2.75 |
| Overall index of crop pro- ductivity | 3.47 | 5.98 | 1.25 | 3.08 |

Source : G. S. Bhalla and G. K. Chaddha, *Structural changes in Income Distribution : A Study of the Impact of Green Revolution*, op. cit.

Table 14

**Exponential annual growth of agricultural output
(1962-65 to 1970-73) in different district Punjab and
West Bengal**

| Punjab | | West Bengal | |
|------------|------|-------------|------|
| Amritsar | 7.98 | Birbhum | 4.01 |
| Bhatinda | 6.87 | Burdwan | 2.02 |
| Ferozepur | 7.14 | Cooch Behar | 1.88 |
| Gurdaspur | 8.97 | Darjeeling | 3.24 |
| Hoshiarpur | 7.41 | Hooghly | 4.25 |
| Jullandhar | 7.46 | Jalpaiguri | 2.62 |
| Kapurthala | 9.34 | Midnapore | 2.58 |

Table 14 (Continued)

| | | | |
|----------|------|----------------|-------|
| Punjab | | West Bengal | |
| Ludhiana | 7.98 | Malda | 3.07 |
| Ropar | 7.00 | Murshidabad | 3.47 |
| Patiala | 8.17 | Nadia | 2.17 |
| Sangrur | 7.37 | Purulia | 2.82 |
| | | West Dinajpore | 2.39 |
| | | Howrah | 1.10 |
| | | 24-Parganas | -0.08 |

Note 1. For Punjab 1971 distribution of districts are taken.

Note 2. Figure for Bankura was not available.

Source : G. S. Bhalia and Y. K. Alagh, *Spatial Patterns of Levels and Growth of Agricultural Output in India*.

Table 15
Urbanization and Agricultural Productivity

| | Yield rate per acre of cropped area (in rupees 60-61 prices) | Percentage of urban to total population |
|----------|--|---|
| | 1977-78 | 1981 |
| Region 1 | 1021.25 | 34.72 |
| Region 2 | 914.37 | 23.04 |
| Region 3 | 767.28 | 19.18 |

Source : G. S. Bhalla and G. K. Chaddha, *A Study of the Impact of Green Revolution*.

Table 16

Ratio of registered factory employment to total population

| Districts | |
|----------------|------|
| 1. Howrah | 5.27 |
| 2. 24-Parganas | 4.02 |
| 3. Burdwan | 2.31 |
| 4. Hooghly | 3.02 |
| 5. Darjeeling | 0.95 |
| 6. Cooch Behar | 0.04 |

Table 16 (Continued)

| Districts | |
|--------------------|------|
| 7. Nadia | 0.31 |
| 8. Midnapore | 0.28 |
| 9. Purulia | 0.26 |
| 10. Birbhum | 0.20 |
| 11. West Dinajpore | 0.26 |
| 12. Murshidabad | 0.04 |
| 13. Jalpaiguri | 0.93 |
| 14. Bankura | 0.07 |
| 15. Malda | 0.01 |

Source : *Government of West Bengal, Economic Review, 1982-83, Calcutta, 1983*

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DISTRIBUTION OF HEALTH AND EDUCATIONAL FACILITIES IN WEST BENGAL FROM 1951 TO 1981

Swati Ghosh

I Introduction

This is an attempt to study the distribution of educational and health facilities in the districts of West Bengal in terms of physical resources and output.

It is increasingly felt in developing countries that improvements in health and educational services play an important part in the process of economic development. Improved educational and health services can influence economic growth in a positive manner by raising productivity. Better standards of health and education not only make people more capable of productive work but also provide opportunities for enriching individual sensibilities. Distributive strategies which aim to provide improved and egalitarian distribution of these two facilities—education and health—help to increase economic welfare and development. Otherwise, developed regions with higher purchasing power and political influence, demanding more of these two facilities, actually get more, thereby increasing the concentration of resources in the developed areas and widening the disparity between regions. Such disparity, in its turn, would attract population towards these regions where these and other facilities are concentrated, leading to an excessive concentration of urban population. On the other hand, if the cities grew or were planned according to an urban hierarchic pattern, the spread of these services would have been in conformity with the pattern of urban-industrial activities. This more even distribution of services could help to restrict migration of people from the less-developed regions to the more-developed ones.

Another point to be considered is that provision of services in the more-developed regions would invariably involve relatively higher costs of land, material, labour and other inputs. In comparison, the same constructional work in less-developed regions would be less expensive. Besides, a section of the beneficiaries of the facilities available in Calcutta come from less-urbanized, less-developed

regions of West Bengal. Had they been provided with those services at their place of origin, they might not migrate at all. Thus a more even distribution of services would be beneficial from the point of social welfare too. Decentralized provision of educational and health facilities is therefore, a political and economic issue which reflects governmental desire to provide an equitable regional distribution of the fruits of development.

Education and Health as Basic Needs

The concern with human capital mainly reflects a concern with health and education. It may be said that distributive strategies such as improved education or better health are not in conflict with economic growth. Development programmes entail not merely an efficient allocation of existing resources but also the creation of additional productive resources, including more productive human resources.

Education is itself a basic need and equality of access to educational services, particularly in less-developed areas, is therefore an important ingredient of basic needs strategy. Lack of access to education denies many people the opportunity to participate fully and meaningfully in the social, economic, cultural and political life of the community. In the Declaration of I.L.O. Conference¹ it was decided that education and vocational training systems should be adopted to national development needs and should avoid an elitist bias, and priority should be given to primary education, specially in less-developed areas.

Health occupies much the same position as education in relation to basic needs strategies. A decent level of health is itself a basic need. At the same time, improvement in health can contribute substantially to increased productivity and to fuller participation in society. The World Health Organisation has proposed a primary health care programme which is specifically oriented to meet the basic needs in the field of health, specially in less-developed regions.

The poor socio-economic conditions under which the low income groups exist in the developing areas are probably more important as determinants of level of health than health services². According to Herbert, unless these conditions are rectified, curative and other health services, even if undertaken on a large scale, are unlikely to have sustained success. Sophisticated health approaches are inappropriate unless backed up by outreach and preventive services. Better preventive services can reduce the need for

expensive periodic treatment. It also reduces health hazards for others in the community.

Some³ are also of the opinion that improved and even distribution of educational and health facilities may favourably affect the demographic condition of a country like India with a high rate of population growth, by reducing the size of the family. Levels of expenditure on improved health and educational services should be established as integral parts of the overall development programme and these services should be made more accessible to the low-income groups. Unfortunately, most of the development programmes are focused on the need of the more-developed, more-urbanized section of the society whereas the majority of the population—mostly the rural inhabitants—are not cared for. This one sided approach has been termed by many economists⁴ as Urban-Bias. Without going into the detailed explanation of the term, and the debate around it, it can be said that rural development along with the provision of urban services should be the aim of any development programme. It is conceded that rural development alone cannot solve the problem of people living in rural area and that the development pattern should be balanced and linked with the urban-industrial sector. Furthermore the tendency to commit a large part of the resources to already established areas, institutions and classes should be rectified.

Since social amenities are frequently perceived in terms of physical facilities and the needs for even the most minimal services are often postponed until funds are available and budgeted to construct such facilities, it may be argued that the limited resources normally available could be most effectively used if focussed on programmes which improve the quality of life. Social indicators such as infant mortality, maternal health, literacy rate etc. are relatively more sensitive measures of social welfare and quality of life which could help in determining resource allocation and monitoring progress in planning.

II Issues and Methodology

In this analysis, the focus has been on the nature and trend of distribution of education and health in the sixteen districts of West Bengal, from 1951 to 1981. The main idea is to examine whether the distribution is biased against the less-developed regions and

whether there exists a clear trend in the pattern of distribution over the years. The intra-group differences in the provision of the two services have also been observed. Here levels of urbanization and industrialization are taken as two major indicators for ranking the districts of West Bengal in terms of development. The level of urbanization is the ratio of urban population to total population in each district while the level of industrialization is the ratio of the number of workers employed in registered factories to total working population of the district expressed as a percentage. Data relating to levels of urbanization and industrialization have been computed from the following sources; Statistical Abstract of West Bengal for 1956, 1962, 1976-77, Bureau of Applied Economics and Statistics and Economic Review of 1982-83, Government of West Bengal, 1984.

Since the average level of urbanization for the entire state in 1981 is 26.47%, the districts have been classified into two groups of more-urbanized and less-urbanized with this figure as the cut-off point. Districts with levels of urbanization greater than 26.47 are termed as more-urbanized and those having lower figure are considered to be less-urbanized. Thus the more-urbanized districts are : Calcutta, Howrah, 24-Parganas, Burdwan, Hooghly and Darjeeling. The remaining districts are the less-urbanized ones.

We should note here that our analysis suffers from the limitations associated with district as unit of observation since some of the districts are large and contain both backward and developed areas as in the case of 24-Parganas.

The average level of industrialization of West Bengal in 1981, as indicated by the proportion of registered factory workers in the working population, is 5.77%, which has been taken as the basis for grouping the districts as more or less industrialised. Basing on 1981 figures, the more-industrialized districts are Howrah, 24-Parganas, Burdwan, and Hooghly. The remaining districts are ranked accordingly. Calcutta has been excluded from the group of less-industrialized ones though its level of industrialization is lower than the state average. This lower figure does not imply that industrial activities are limited in Calcutta. In fact, a major part of the commercial and trading activities of the whole of eastern zone is carried out in its periphery that is within Calcutta Metropolitan area with most of the head offices of factories being located here. But the number of factories and the proportion of factory workers are

relatively low within the city because the tertiary sector is even more important.

The districts which are both more-urbanized and more-industrialized are Howrah, 24-Parganas, Burdwan and Hooghly. And the districts which are both less-urbanized and less-industrialized can be listed as Nadia, Jalpaiguri, Midnapore, Purulia, Birbhum, Bankura, West Dinajpur, Murshidabad, Cooch Behar and Malda.

The following are the socio-economic indicators which have been chosen in order to measure the distribution of health and educational inputs among the districts :

1. Number of doctors⁵ per 1,00,000 population.
2. Number of health centres⁶ per 1,00,000 population.
3. Number of clinics, welfare centres and other institutions, excluding hospitals, per 1,00,000 population.
4. Number of dispensaries per 1,00,000 population.
5. Number of beds per 1,00,000 population.
6. Number of primary schools per 1,00,000 population.
7. Number of middle schools per 1,00,000 population.
8. Number of high schools per 1,00,000 population.
9. Number of teachers for general education per 1,00,000 population.
10. Per capita expenditure on education in rupees.

Besides physical resources, per capita expenditure on education is also considered as a measure of the provision of educational facilities in different districts. Per capita expenditure on medical facilities could not be used since no district wise break-up of the total fund allocated for medical service is available. Variables such as number of hospitals and number of colleges are not considered.

On the output side, the socio-economic indicators used to measure the effects of developmental activities in education and health are :

11. Crude literacy rate divided into male literacy rate and female literacy rate.
12. Infant death rate per 1,000 live births.

Data Source

Data relating to the number of doctors, health centres, clinics, dispensaries, beds, number of high schools, middle schools, primary schools, number of teachers, per capita expenditure on

education, literacy rate and infant death rate for the years 1951, 1961 1971 and 1977 have been computed from Statistical Abstract of West Bengal 1976-77, Government of West Bengal, Bureau of Applied Economics and Statistics.

Numbers of health centres, clinics and dispensaries for 1981 have been computed from the brochure 'Health on the March, West Bengal 1981' of State Bureau of Health Intelligence, Directorate of Health Service, Government of West Bengal, 1984.

Numbers of high schools, middle schools, primary schools and total expenditure on education for 1981 have been collected from the records of the Statistical Cell of the Education Directorate, Government of West Bengal.

Numbers of doctors and teachers for 1971 have been taken from General Economic Tables, Part II B (iii), Series 22, Census of India 1971 and Literacy Rate for 1981 from Series 23, West Bengal Provisional Population Totals, Paper 1, Census of India, 1981.

III Computation and Results Based on Urbanization

By comparing the mean values of the two groups, 1 and 2, one more developed and the other less developed for a particular variable, the idea of distribution of resources is obtained. The significance of difference in the average values between two groups is found by the 't' test; the difference is taken as statistically significant when the value of 't' is greater than the relevant expected value found in t table for a given number of observations†. The intra-group disparity in distribution is obtained from the coefficient of variation (C.V.) for each group and has been indicated as CV_1 and CV_2 . Similarly, means and standard deviations for the two groups have been denoted by $mean_1$ $mean_2$, sd_1 and sd_2 respectively.

When districts are classified as more-urbanized and less-urbanized, the following results emerge.

(i) It is observed from Table 3 that the average number of doctors increases marginally for group 1 over the years while that for group 2, declines. This shows that over time, the coverage of the population with doctors is declining everywhere except in Calcutta city. The value of 't' is found to be statistically significant for 1951 but

† Value of 't' is significant when 't' exceeds the value $t_{.05} = 2.15$ and $t_{.01} = 2.98$ for 5% and 1% levels of significance, for two degrees of freedom, respectively, when the number of observations is 16.

from 1961 it becomes low and statistically insignificant. Inter-group disparity is reduced over the years but high intra-group disparity in distribution exists in the case of group 1 while low disparity in distribution is observed for group 2.

When Calcutta is excluded from group 1, the intra-group disparity of the group declines considerably as also the inter-group difference. In fact the intra-group disparity in the case of group 1 becomes lower than that of group 2 when Calcutta is excluded. This reveals that doctors are highly concentrated in urban Calcutta, and also that considerable difference exists, among more urbanized districts—between Calcutta and others as revealed by a drastic decline in the value of CV_1 once Calcutta is excluded.

When Calcutta is excluded from group 1, the highly significant value of 't' seems paradoxical. But distribution in Calcutta is such an aberration relative to other districts that when Calcutta is excluded the standard deviation of the group reduces at a much greater rate than the mean value. This results in a highly significant value of 't'.

(ii) From Table 4 it is seen that the number of health centres per 1,00,000 population increases over time for both the groups but the less developed group has more of the centres than the more-developed ones till 1971. Only in 1981, the more developed group shows better results though the difference is not significant in any of the years. Within-group disparity in group 1 increases while that in group 2 declines over time. It needs to be mentioned that Calcutta is not covered by this particular set-up of health centres, which is one of the main reason for the better performance of the less-developed groups in general. Furthermore, these calculations do not take into account the larger hospitals in urban areas of more-urbanized districts. This also shows that over time, while the spread of such centres is becoming more uniform in less developed areas, the trend in the more developed areas is the opposite one of widening intra-group disparity.

(iii) The number of clinics and welfare centres per 1,00,000 population shows an increase, in Table 5 with 1961 registering the highest average value for both the groups. But the difference between the two groups is not statistically significant. The intra-group disparity for group 2 remains more-or-less the same from 1951 to 1981. For group 1, the disparity is greater; increasing till 1971 and registering considerable reduction between 1971 and 1981. When Calcutta is excluded the mean of group 1 shows a

slightly higher value but intra-group disparity shows no specific trend. This might be due to the fact that welfare-centres and clinics of Calcutta, though smaller in number, are larger in size. It is clear that over time the difference among urbanized districts is declining in terms of the distribution of clinics and welfare centres. However, these facilities seem to be more uniformly distributed among the less-urbanized districts.

(iv) As Table 6 shows the average number of dispensaries per 1,00,000 population in both groups fell over the years. This implies that number of dispensaries did not increase in parity with increase in population. There is not much significant difference between the two groups while the intra-group disparity is higher in group 1. When Calcutta is excluded, there is not much significant change either in inter-group or intra-group disparity.

We have noted that 'health centres' do not exist in Calcutta, and now we note that the number of 'dispensaries' in Calcutta is small which explains the limited significance of the former in Table 6. This could be the effect of deliberate governmental policy with the objective of providing health facilities in the rural and less-developed regions. If we observe the rural-urban break-up of the distribution from Table 7 we observe that rural areas have all the health centres and a substantially larger share of dispensaries and clinics.

This does not imply that provision of health facility is non-existent or inadequate in Calcutta. On the contrary, as we shall see soon, Calcutta is actually relatively better endowed with health facilities, but these are somewhat different from the state-run health system based on health centres and dispensaries in the other districts of the state. Calcutta's health institutions tend to be more sophisticated, advanced, much bigger and with wider linkages than their counterparts in other districts. This is evident from Table 8 which shows that Calcutta with only 6.06% of population accounts for 16.58% of hospitals and 30.11% of beds. While the overall average number of beds per 1,000 population is a mere 0.87% for West Bengal, in case of Calcutta the figure is 4.30%.

(v) Table 8a shows, that the availability of hospital beds per 1,00,000 population increases for both the groups over the years, though the increase is more substantial for group 1. Inter-group difference is statistically insignificant, while intra-group difference is greater in group 1 than in group 2. When Calcutta is excluded the

difference between two group declines for reasons mentioned above. In no case intra-group difference is statistically significant. Intra-group disparity for group 1 drastically declines when Calcutta is excluded.

(vi) The number of primary schools per 1,00,000 population increases over the years for both the groups, except in 1971. The increase is very substantial between 1971 and 1981, which probably indicates the high priority assigned to this field since 1977.

Table 9 shows that group 2 has a greater number of primary schools, though the difference is statistically significant only in 1961. When Calcutta is excluded from the more-urbanized group the difference is reduced. This reveals that Calcutta has less than average number of primary schools. Intra-group disparity is greater in group 2.

(vii) The number of middle schools per 1,00,000 population is more or less the same over the years, which implies that increase in number has kept pace with the increase in population. The difference between the two groups is statistically insignificant though it is marginally higher for group 2. Intra-group disparity for both groups declines over the years (Table 10).

Though there are more schools per 1,00,000 population both primary and middle—in less urbanized districts, these are usually smaller in student-strength, as against the larger size of such schools in more developed districts. Here too exclusion of Calcutta improved the average for group 1 and also reduces intra-group disparity, though the deficiency in number is more than made up by their bigger size.

(viii) From Table 11 it is seen that the number of high schools per 1,00,000 population increases over the years for both the groups, and the increase is most pronounced in 1981. Group 1 has larger number of high schools though the difference between the two groups is statistically significant only in 1951. The difference declines over the years and becomes statistically insignificant. When Calcutta is excluded not much change is observed in the average distribution, till 1971, which indicates that unlike primary and secondary schools the number of high schools in Calcutta more or less corresponds to the group average. But in 1981, the number of high schools seems to have increased in Calcutta relative to other more-developed district as the mean value reflects. Thus unlike the

case of primary and middle schools where the less urbanized areas contain more schools (though not necessarily more students) here the more urbanized districts are more favourably suited even in terms of number of schools. Intra-group disparity is greater in group 2 and declines only in 1981. Over time, the disparity declines in the case of both groups.

(ix) The number of teachers per 1,00,000 population increases over the years for both the groups though the difference between two groups is not statistically significant. Intra-group disparity is higher for group 2 and changes marginally over the years. For group 1 the disparity is highest in 1971 which declines to a large extent in 1981. Not much change is observed when Calcutta is excluded, which indicates that the number of teachers in Calcutta almost corresponds to the group average (Table 12).

(x) Per capita expenditure on education as Table 13 shows, increases over the years for both the groups. For group 1, the increase during 1971-81 appears substantial, but unlike the earlier years, the figures do not change when Calcutta is excluded. This indicates both the higher priority accorded to Calcutta and the sharp decline in Calcutta's importance during this period. The difference between the two group is statistically significant in 1951 and 1971 but insignificant in 1981, when the difference between the two groups is much reduced which indicates the higher priority assigned to less urbanized areas during 1971-81 particularly since 1977. The intra-group disparity in distribution is usually very high for group 1 compared to that of group 2 and when Calcutta is excluded, intra-group disparity for group 1 reduces sharply. But in 1981 both the intra-group disparity declines sharply in case of group 1, as also the relative importance of Calcutta.

(xi) From Table 14 the percentage of literacy is found to be increasing in both the groups over the years. Increase in female literacy is more prominent in 1981, specially in group 2. The difference in the literacy rates between the two groups is statistically significant for all the years and for both male and female population. When Calcutta is excluded the difference is still statistically significant. The intra-group disparity in the more-urbanized group decreases over the years both for male and female literacy. For the less-urbanized group, the intra-group disparity remains more or less the same for male literacy and reduces to some extent for female

literacy, which indicates progress in this field in the hitherto backward areas.

(xii) Infant death rate from Table 15 is found to be higher in group 1 than in group 2 for all the years considered, though the difference between the two groups is statistically insignificant and declining over time. One of the reasons for this could be the better reporting of death in more urbanized regions. A clear decreasing trend may be observed over the years for both groups. Intra-group disparity is greater in group 1 till 1971, in 1981 the pattern is reversed for reasons unknown to us.

IV Computation and Results based on Industrialization

When the districts are classified as less-industrialized and more-industrialized, Calcutta city is excluded for the obvious reason that though it is grouped as less industrialized district by level of industrialization, it is relatively highly endowed with educational and health facilities compared to other districts. The following are the main conclusions which arise from our statistical exercises :

(i) The availability of doctors in group 1 is greater than in group 2. The number of doctors per 1,00,000 population does not increase in conformity with increase in population particularly in the case of group 2. The difference between the two groups is statistically significant for all the years except 1971. The intra-group disparity is greater for group 2 (Table 16).

(ii) It can be seen from Table 17 that the number of health centres increases over time for both the groups, though group 2 has relatively greater number of health centres until 1971. This is probably because, these health centres are smaller and spread over a larger low density area. In 1981, the increase in average value of group 1 is marked which assumes new health centres being set-up in more-industrial areas. The difference between two groups is significant only in 1961. Intra-group disparity is lower in group 2 and shows a decreasing trend over the years as against increasing disparity in group 1.

(iii) As Table 18 shows the number of clinics and welfare-centres increases more or less in harmony with population increase. The highest increase is in 1961. The difference between the two groups is not statistically significant. Group 2 has greater value since 1961, while the clinics in group 1 are likely to be larger in size. Intra-group disparity decreases in 1981 for group 2 and increases for group 1.

The observations correspond to those based on level of urbanization and can be accounted similarly. -

(iv) Table 19 shows that provision of number of dispensaries per 1,00,000 population declines with increase in population over the years. This implies the decreasing importance of the particular set up of dispensaries. The difference between the two group reduces and is not statistically significant. Disparity within group 2 increases gradually while that for group 1 reduces till 1971 and rises again in 1981.

(v) The number of hospital beds per 1,00,000 population as observed from Table 20, increases over time for both the groups, though group 2 has a higher average value than group 1. This implies that without considering Calcutta, the distribution of hospital beds does not differ substantially between more and less industrialized groups. The difference between the two groups is not statistically significant. Disparity within group 2 decreases gradually, though it is relatively higher than group 1, throughout the period.

(vi) As for primary schools, Table 21 shows that while the number of schools per 1,00,000 population increases for both the groups, it is higher for group 2 for all the years. The difference between the two groups is statistically significant only in 1951 and reduces since then. The intra-group difference is higher for group 2 and reduces to some extent from 1961.

(vii) It is seen from Table 22 that the number of middle schools per 1,00,000 population increases marginally and is just in conformity with increase in population. The difference between the two groups is not statistically significant. The intra-group disparity is lower in group 1 than group 2 and declines for both the groups over the years. Similar to urbanization criteria, the results reveal that the size of primary and middle schools are smaller in less-industrialized area, serving a smaller population.

(viii) The number of high schools per 1,00,000 population as seen from Table 23 increases marginally for both the groups and maintains parity with population increase. The distribution is higher in group 1 but the difference is significant only in 1951. Within-group disparity is higher in group 2 and reduces for both the groups in 1981. This result also corresponds to those based on urbanization, implying high schools are more in more-industrialized area.

(ix) The number of teachers per 1,00,000 population as Table 24 shows, increases over time for both the groups and the difference between the two groups is never statistically significant. Intra-group disparity is higher in group 2.

(x) From Table 25 it is seen that per capita expenditure on education increases substantially over the years for both the groups. With group 1 having higher value than group 2. Within-group disparity decreases for both the groups over the years.

(xi) Both male and female literacy rate increases over time from 1951-1981 as Table 26 shows. The difference in the mean value between the two groups is significant for both being higher in group 1 while intra-group difference is greater in group 2.

(xii) From Table 27 infant death rate is found to be higher in group 2 in 1971 and 1981 but the opposite is the case in the earlier years, though the difference between the two groups is not statistically significant. Here, the results of earlier years correspond to those based on urbanization, but it is not clear why the relative position of the two groups would change after 1971. There is a decreasing trend in the mean value over the years while within-group disparity between the two groups shows no specific trend.

V Conclusion

Overall Performance

In general it can be seen that the availability of educational and health facilities increases over time in both more-developed and the less-developed districts. This is further evident from the rising trend of the mean values for most of the variables. Variables such as numbers of health-centres and hospital beds, number of teachers, per capita expenditure on education, number of primary and high schools and literacy rate show consistently increasing values while infant death rate shows a steady decreasing trend for all the districts from 1951 to 1981. For some of the variables, e.g., the number of middle schools and the number of clinics and welfare centres the figures indicate that the increase is just in conformity with increase in population. The only exception is the number of dispensaries which show a decreasing trend over the years. This merely implies that this particular set up of health facilities is being increasingly

supplemented by provision of multipurpose, larger and more sophisticated units.

Separate exercises based on urbanization and industrialization criteria reveal a more or less identical pattern in terms of the included variables.

Inter-group Difference It is found that these facilities abound in more-developed districts in terms of urbanization and industrialization. While for a few variables, such as number of primary and middle schools and number of health centres the figures are higher in less-developed group of districts, this does not account for the bigger size of schools in urbanized-industrialized areas, and the fact is that the latter is endowed with more hospitals and doctors outside the framework of health centres. Infant mortality is also found to be higher in more-developed group of districts, but this may indicate no more than the fact that the data on infant mortality are better recorded in more urbanized areas. The difference between the two groups does not show any specific trend for some of the variables while for most of them a definite decrease over time may be noted. This indicates a greater allocation of health and educational inputs in backward areas over time particularly since 1977. The difference between the two groups is statistically significant for quite a number of variables such as the number of doctors, number of high schools, per capita expenditure on education and male-female literacy rate. For some variables, e.g., number of clinics, dispensaries, the number of hospital beds, the number of primary schools and the number of teachers and infant mortality rate—the difference between the two groups is considerably high though not always statistically significant. Variables which do not show considerable disparity in distribution between two groups are the number of middle schools and health centres.

Intra-group Disparity

The intra-group disparity is generally greater in the case of the more-developed districts. This is reflected in the high value of coefficient of variation in the case of group 1 which implies uneven development. A major reason for this high intra-group disparity is the presence of Calcutta which accounts for the very high proportion of health and educational facilities.

Over time, the intra-group disparity is reduced for both the groups, for variables like per capita expenditure on education, male-female literacy rate, the number of hospital beds and dispensaries

and the number of middle schools. For variables like the number of primary schools and infant mortality rate, the intra-group disparity decreases for group 1 only. The number of high schools shows a higher coefficient of variation for group 2, though it is reduced over the years. Generally speaking, the tendency is towards a more equal distribution of health and educational inputs over time as recorded by reduction in both inter-group and intra-group disparities.

Impact of Calcutta

It is observed that when Calcutta is excluded both inter-group and intra-group disparities are reduced to a large extent. This is particularly relevant for variables like the number of the doctors, the number of hospital beds, the number of high schools and infant mortality rate. When Calcutta is excluded not only the average value of number of doctors reduces substantially but the standard deviation within group 1 reduces as much as to raise the value of 't' to statistical significance. The share of hospital beds is also larger in Calcutta. Furthermore, since Calcutta is not covered under the particular set-up of health-centres and has very few dispensaries of the type considered, this causes the average values of the less-developed group of districts, for these variables, to be misleadingly higher, though the service provided at these centres is less-advanced and less-sophisticated than these available at Calcutta, in terms of the larger number of hospitals, their size and coverage. Calcutta is beyond doubt endowed with the best possible medical facilities available in the state. Variables like primary and middle schools are found in greater numbers in less-developed group and less in Calcutta. Thus when Calcutta is excluded the average value of group 1 improves and the intra-group disparity declines. This again may indicate that primary schools are bigger in size in Calcutta and some schools provide primary and secondary level of education as well. Calcutta has a better share of high schools, which underlines Calcutta's predominance in the educational field.

Progress during 1971-1981

A significant increase in the spread of educational and health facilities has been noted during 1971 to 1981. The increase has been most prominent in the field of education. On the input side, there has been an increase in per capita expenditure on education, which is more substantial for less-developed group of districts : Group 1 records an increase of 32.73% including Calcutta and 97.73% excluding Calcutta while group 2 shows an increase of 105.0%.

Among other variables, high school shows much improvement during this decade; there is almost 55.91% increase in the number of high schools for both the groups. On the output side, literacy rate has undergone much improvement, specially female literacy, which increases at a much faster rate than male literacy in the less-developed group of districts. While male literacy increases by 22.96%, female literacy rises by 44.41% over the decade in case of group 2 districts. At the same time the rate of improvement is less marked among more developed districts.

This shows there has been a serious attempt towards a better distribution of educational facilities specially in the less-developed areas.

It is also observed that during 1971-1981, intra-group disparity declines for both the groups. This decrease is considerable for variables like per capita expenditure on education, the number of clinics and dispensaries, the number of hospital beds and the number of high schools. Some of the facilities have been better distributed among less-developed districts only, as indicated by low intra-group disparity of variables, e.g., number of primary schools, female literacy rate and number of doctors. Intra-group disparity has increased for variables like number of health centres, number of middle schools and infant death rate, during the decade.

Table 1**Districts ranked according to level of urbanization, 1981**

| Districts | Level of urbanization (in %) |
|---------------|------------------------------|
| Calcutta | 100.00 |
| Howrah | 45.12 |
| 24-Parganas | 38.90 |
| Burdwan | 29.65 |
| Hooghly | 27.54 |
| Darjeeling | 27.86 |
| Nadia | 21.44 |
| Jalpaiguri | 14.08 |
| West Dinajpur | 11.14 |
| Murshidabad | 9.30 |
| Purulia | 9.00 |
| Midnapore | 8.54 |
| Birbhum | 8.33 |
| Bankura | 7.63 |
| Cooch Behar | 6.91 |
| Malda | 4.78 |
| West Bengal | 26.47 |

Source : Government of West Bengal, *Economic Review 1982-83*, Calcutta, 1983.

Table 2**Districts ranked according to level of industrialization, 1981**

| Districts | Level of industrialization (in %) |
|-------------|-----------------------------------|
| Howrah | 20.11 |
| 24-Parganas | 15.45 |
| Hooghly | 10.59 |
| Burdwan | 8.25 |
| Darjeeling | 2.73 |
| Jalpaiguri | 2.93 |

Table 2 (Continued)

| | |
|---------------|------|
| Calcutta | 1.44 |
| Nadia | 1.88 |
| Midnapore | 0.96 |
| Purulia | 0.85 |
| Birbhum | 0.70 |
| Bankura | 0.25 |
| West Dinajpur | 0.22 |
| Murshidabad | 0.15 |
| Cooch Behar | 0.14 |
| Malda | 0.05 |
| West Bengal | 5.77 |

Source : Government of West Bengal, *Economic Review 1982-83*, Calcutta, 1983.

Table 3

Distribution of doctors per 1,00,000 population for more and less urbanized districts of West Bengal : 1951- 1977

| Year | Number of doctors per 1,00,000 population | | | | | | | |
|-------------------|---|--------|--------|--------|--------------------|-------|-------|--------|
| | Including Calcutta | | | | Excluding Calcutta | | | |
| Calculation | 1951 | 1961 | 1971 | 1977†† | 1951 | 1961 | 1971 | 1977†† |
| Mean ₁ | 80.01 | 68.63 | 85.46 | 82.40 | 46.79 | 36.37 | 38.18 | 33.34 |
| Mean ₂ | 28.62 | 18.99 | 23.34 | 16.70 | 28.62 | 18.89 | 23.34 | 16.72 |
| 't' | 2.17† | 2.11 | 1.84 | 1.85 | 3.05† | 3.52† | 3.67† | 3.50 |
| C.V. ₁ | 93.59 | 109.02 | 124.26 | 133.74 | 22.27 | 24.64 | 28.23 | 29.72 |
| C.V. ₂ | 38.47 | 47.29 | 72.41 | 47.90 | 38.47 | 47.29 | 72.41 | 47.90 |

† denotes significant value of 't'.

†† data of 1977 have been used since that of 1981 are not available.

Table 4

**Distribution of number of health centres per 1,00,000
population for more and less urbanized districts of West
Bengal : 1951-1981**

| | 1951 | 1961 | 1971 | 1981 |
|-------------------|-------|-------|-------|-------|
| Mean ₁ | 0.56 | 1.76 | 2.21 | 3.17 |
| Mean ₂ | 0.66 | 1.91 | 2.34 | 2.53 |
| t | -1.06 | -0.58 | -0.43 | 1.07 |
| C.V. ₁ | 26.77 | 38.64 | 38.46 | 57.10 |
| C.V. ₂ | 53.03 | 19.90 | 14.96 | 18.58 |

† Calculation has been made excluding Calcutta from group 1 since it does not have the particular type of health centres being considered here.

Table 5

**Distribution of clinics and welfare centres per 1,00,000
population : 1951-1981**

| | 1951 | | 1961 | | 1971 | | 1981 | |
|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | Inclu- ding C | Exclu- ding C | Inclu- ding C | Exclu- ding C | Inclu- ding C | Exclu- ding C | Inclu- ding C | Exclu- ding C |
| Mean ₁ | 5.15 | 5.68 | 7.65 | 7.94 | 6.21 | 6.28 | 6.53 | 6.52 |
| Mean ₂ | 4.95 | 4.95 | 6.20 | 6.20 | 4.88 | 4.88 | 5.39 | 5.33 |
| t | 0.27 | 1.03 | 1.17 | 1.33 | 1.20 | 1.18 | 1.93 | 1.12 |
| C.V. ₁ | 38.45 | 30.63 | 46.93 | 48.61 | 61.19 | 57.43 | 40.89 | 44.78 |
| C.V. ₂ | 21.01 | 21.01 | 20.32 | 20.32 | 20.70 | 20.70 | 19.29 | 19.29 |

C denotes Calcutta.

Table 6

Distribution of number of dispensaries per 1,00,000 population for more and less urbanized districts of West Bengal : 1951-1981

| | 1951 | | 1961 | | 1971 | | 1981 | |
|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | Inclu- ding C | Exclu- ding C | Inclu- ding C | Exclu- ding C | Inclu- ding C | Exclu- ding C | Inclu- ding C | Exclu- ding C |
| Mean ₁ | 2.54 | 2.84 | 1.81 | 1.85 | 1.68 | 1.81 | 1.37 | 1.33 |
| Mean ₂ | 2.53 | 2.59 | 1.47 | 1.47 | 0.86 | 0.86 | 0.56 | 0.56 |
| t | 0.02 | 0.46 | 1.03 | 1.06 | 1.82 | 2.02 | 0.76 | 2.48† |
| CV ₁ | 68.50 | 61.62 | 37.02 | 38.92 | 81.55 | 81.22 | 64.23 | 71.64 |
| CV ₂ | 36.36 | 36.36 | 41.50 | 41.50 | 39.53 | 39.53 | 37.50 | 37.50 |

† denotes significant value of 't'.

C denotes Calcutta

Table 7

Distribution of health centres, dispensaries and clinics in urban and rural areas, West Bengal 1981

| Institutions | Urban | Rural | Total |
|----------------|-------|-------|-------|
| Health Centres | — | 1,063 | 1,063 |
| Dispensaries | 150 | 268 | 418 |
| Clinics | 421 | 537 | 958 |
| Total | 571 | 1,868 | 2,439 |

Source : *Health on the March, West Bengal 1981*, State Bureau of Intelligence, Government of West Bengal, 1981.

Table 8

Percentage Distribution of and number of hospitals and hospital beds for 16 districts alongwith percentage of population in each district for 1981

| Districts | Total Number of hospitals | Percent- age of hospitals in district | Total Number of hospital beds | Number of beds per 1,000 population | Percent- age of population in district | Percent- age of beds in the district |
|---------------|---------------------------|--|-------------------------------|-------------------------------------|---|---|
| Bankura | 8 | 1.07 | 1,957 | 0.82 | 4.35 | 4.15 |
| Birbhum | 8 | 2.01 | 965 | 0.46 | 3.84 | 2.07 |
| Bardhaman | 36 | 9.65 | 4,276 | 0.88 | 8.86 | 9.07 |
| Cooch Behar | 66 | 16.58 | 14,795 | 4.30 | 6.06 | 30.11 |
| Cooch Behar | 6 | 1.51 | 680 | 0.38 | 1.25 | 1.44 |
| Darjiling | 37 | 9.29 | 2,135 | 2.10 | 1.88 | 4.57 |
| Hugli | 27 | 6.78 | 2,608 | 0.77 | 6.52 | 5.51 |
| Howrah | 20 | 5.03 | 2,469 | 0.83 | 5.44 | 5.24 |
| Jalpaiguri | 49 | 12.51 | 1,308 | 0.38 | 4.00 | 3.69 |
| Maldah | 6 | 1.51 | 495 | 0.24 | 5.32 | 1.05 |
| Medinipur | 27 | 6.78 | 2,552 | 0.64 | 12.05 | 4.88 |
| Murshidabad | 20 | 5.03 | 2,377 | 0.36 | 7.07 | 4.39 |
| Nadia | 19 | 4.77 | 4,159 | 1.40 | 5.43 | 8.82 |
| Putubya | 7 | 1.76 | 1,388 | 0.86 | 3.09 | 2.52 |
| 24 Parganas | 56 | 14.00 | 5,241 | 0.49 | 29.68 | 15.12 |
| West Dinajpur | 6 | 1.51 | 608 | 0.27 | 4.41 | 1.05 |
| Total | 398 | 100.00 | 47,748 | 1.08 | 100.00 | 100.00 |

Source (1) *Health on the March, West Bengal 1981* Directorate of Health Services, Government of West Bengal, 1981.
 (2) *Census of India, 1981, Provisional Population totals series-23, (West Bengal) Paper 1, Government of India, 1981.*

Table 8a

Distribution of beds per 1,00,000 population for more or less urbanized districts of West Bengal : 1951-1981

| | 1951 | | 1961 | | 1971 | | 1981 | |
|-------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| | Includ- ing Cal- cutta | Exclud- ing Cal- cutta | Includ- ing Cal- cutta | Exclud- ing Cal- cutta | Includ- ing Cal- cutta | Exclud- ing Cal- cutta | Includ- ing Cal- cutta | Exclud- ing Cal- cutta |
| Mean ₁ | 10.56 | 3.38 | 12.58 | 7.87 | 15.71 | 11.13 | 16.96 | 11.70 |
| Mean ₂ | 5.09 | 5.09 | 5.32 | 5.32 | 7.53 | 7.53 | 8.23 | 8.23 |
| t | 1.83 | 1.29 | 1.92 | 1.92 | 2.04 | 1.34 | 2.03 | 1.40 |
| C.V. ₁ | 83.24 | 12.43 | 90.77 | 76.49 | 73.22 | 54.55 | 77.06 | 28.35 |
| C.V. ₂ | 56.78 | 56.78 | 43.23 | 43.23 | 56.44 | 56.44 | 41.80 | 41.80 |

Table 9

Distribution of primary schools per 1,00,000 population for more and less urbanized districts of West Bengal : 1951-1981

| | 1951 | | 1961 | | 1971 | | 1981 | |
|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C |
| Mean ₁ | 56.91 | 64.90 | 71.37 | 78.25 | 63.14 | 68.86 | 75.03 | 82.63 |
| Mean ₂ | 72.56 | 72.56 | 101.43 | 101.43 | 87.60 | 87.60 | 99.55 | 99.55 |
| t | -2.01 | -1.28 | -2.52† | -1.98 | -2.12 | -1.58 | -2.01 | -1.36 |
| C.V. ₁ | 33.98 | 12.53 | 25.14 | 6.56 | 21.16 | 5.88 | 23.11 | 12.60 |
| C.V. ₂ | 16.46 | 16.46 | 24.94 | 24.94 | 29.47 | 29.47 | 26.34 | 26.34 |

C denotes Calcutta.

† denotes significant value of 't'.

Table 10

Distribution of number of middle schools per 1,00,000 population for those and less urbanized districts of West Bengal : 1951-1981

| | 1951 | | 1961 | | 1971 | | 1981 | |
|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C |
| Mean ₁ | 5.34 | 6.18 | 5.70 | 6.33 | 5.60 | 6.07 | 5.89 | 6.32 |
| Mean ₂ | 6.47 | 6.47 | 5.96 | 5.96 | 6.19 | 6.19 | 6.64 | 6.64 |
| t | -0.90 | -0.69 | -0.71 | -0.33 | -0.69 | -0.18 | -0.99 | -0.51 |
| C.V. ₁ | 36.70 | 0.06 | 28.07 | 12.64 | 26.25 | 18.29 | 21.56 | 14.40 |
| C.V. ₂ | 40.95 | 40.95 | 29.53 | 29.53 | 20.19 | 20.19 | 23.49 | 23.49 |

C indicates Calcutta.

Table 11

**Distribution of number of high schools per 1,00,000
population for more and less urbanized districts of West
Bengal : 1951-1981**

| | 1951 | | 1961 | | 1971 | | 1981 | |
|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C |
| Mean ₁ | 6.25 | 6.07 | 4.42 | 4.30 | 4.65 | 4.81 | 8.02 | 7.50 |
| Mean ₂ | 3.87 | 3.87 | 3.61 | 3.61 | 4.15 | 4.15 | 6.47 | 6.47 |
| t | 4.32† | 3.72† | 1.53 | 0.57 | 0.89 | 1.15 | 2.04 | 1.41 |
| C.V. ₁ | 12.80 | 12.69 | 9.50 | 8.37 | 14.19 | 12.83 | 16.83 | 10.26 |
| C.V. ₂ | 30.75 | 30.75 | 33.80 | 33.80 | 30.36 | 30.36 | 23.34 | 23.34 |

C indicates Calcutta.

† denotes significant value of 't'.

Table 12

**Distribution of teachers per 1,00,000 population for
more and less urbanized districts of West Bengal :
1951-1981**

| | 1951 | | 1961 | | 1971 | | 1981 | |
|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C |
| Mean ₁ | 284.93 | 284.71 | 379.55 | 387.83 | 594.72 | 549.47 | 512.05 | 506.30 |
| Mean ₂ | 260.21 | 260.21 | 351.53 | 351.53 | 512.96 | 512.96 | 477.63 | 477.63 |
| t | 1.02 | 0.95 | 0.57 | 0.68 | 1.19 | 0.55 | 0.77 | 0.59 |
| C.V. ₁ | 11.24 | 10.43 | 11.33 | 11.21 | 31.16 | 30.95 | 14.42 | 15.73 |
| C.V. ₂ | 20.27 | 20.27 | 32.41 | 32.41 | 17.65 | 17.65 | 19.06 | 19.06 |

C indicates Calcutta

Table 13

Distribution of per capita expenditure (in Rs.) for more and less urbanized districts of West Bengal : 1951-1981

| | 1951 | | 1961 | | 1971 | | 1981 | |
|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C |
| Mean ₁ | 10.56 | 3.17 | 10.27 | 7.06 | 24.23 | 17.37 | 32.16 | 34.38 |
| Mean ₂ | 2.22 | 2.22 | 5.73 | 5.73 | 13.15 | 13.15 | 26.98 | 26.98 |
| t | 3.03† | 2.50† | 1.79 | 1.01 | 2.18† | 3.52† | 1.88 | 2.98† |
| C.V. ₁ | 83.23 | 12.30 | 70.79 | 17.85 | 65.08 | 23.09 | 19.93 | 12.91 |
| C.V. ₂ | 36.00 | 36.00 | 48.34 | 48.34 | 25.32 | 25.32 | 16.86 | 16.86 |

C indicates Calcutta and

† denotes significant value of 't'.

Table 14

Male and Female literacy rates in more and less urbanized districts of West Bengal : 1951-1981

| A. Male | | Literacy | | Rate | | | | | |
|-------------------|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | | 1951 | | 1961 | | 1971 | | 1981 | |
| | | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C |
| Mean ₁ | | 38.74 | 34.75 | 46.92 | 43.58 | 49.33 | 46.38 | 58.29 | 55.31 |
| Mean ₂ | | 24.21 | 24.21 | 30.58 | 30.58 | 33.79 | 33.79 | 41.55 | 41.55 |
| t | | 3.81† | 3.69† | 4.63† | 4.48† | 4.75† | 4.52† | 4.45† | 3.47† |
| C.V. ₁ | | 24.55 | 10.36 | 17.26 | 7.89 | 14.80 | 7.40 | 12.85 | 6.73 |
| C.V. ₂ | | 23.83 | 23.83 | 19.39 | 19.39 | 16.69 | 16.69 | 17.06 | 17.06 |

| B. Female | | Literacy | | Rate | | | | | |
|-------------------|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | | 1951 | | 1961 | | 1971 | | 1981 | |
| | | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C |
| Mean ₁ | | 17.75 | 12.63 | 24.95 | 19.48 | 31.07 | 26.40 | 40.72 | 36.24 |
| Mean ₂ | | 6.87 | 6.87 | 9.73 | 9.73 | 14.41 | 14.41 | 20.81 | 20.81 |
| t | | 2.88† | 3.88† | 3.67† | 3.01† | 4.41† | 5.63† | 5.04† | 5.76* |
| C.V. ₁ | | 43.52 | 21.38 | 49.94 | 13.30 | 11.66 | 7.92 | 25.54 | 8.66 |
| C.V. ₂ | | 35.81 | 35.81 | 36.79 | 36.79 | 30.88 | 30.88 | 26.24 | 26.24 |

C indicates Calcutta.

† denotes significant value of 't'.

Table 15

Distribution of infant death rate per 1,000 live birth, for more and less urbanized districts of West Bengal : 1951-1981

| | 1951 | | 1961 | | 1971 | | 1981 | |
|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C | Includ- ing C | Exclud- ing C |
| Mean ₁ | 122.73 | 106.68 | 72.40 | 63.38 | 45.13 | 38.30 | 47.55 | 37.88 |
| Mean ₂ | 102.40 | 102.40 | 53.80 | 53.80 | 44.37 | 44.37 | 43.31 | 43.31 |
| t | 1.38 | 0.04 | 1.82 | 0.12 | 0.13 | -0.37 | 0.38 | -0.07 |
| C.V. ₁ | 35.95 | 26.36 | 30.84 | 30.86 | 39.37 | 26.08 | 18.40 | 12.98 |
| C.V. ₂ | 12.48 | 12.48 | 25.94 | 25.94 | 12.37 | 12.37 | 44.49 | 44.49 |

C indicates Calcutta.

Table 16

Distribution of number of doctors per 1,00,000 population for more and less industrialized districts of West Bengal : 1951-1981

| | 1951 | 1961 | 1971 | 1977†† |
|-------------------|-------|-------|-------|--------|
| Mean ₁ | 48.00 | 37.52 | 40.80 | 35.80 |
| Mean ₂ | 30.17 | 19.69 | 23.70 | 17.30 |
| t | 2.78† | 3.49† | 1.94 | 3.85† |
| C.V. ₁ | 23.54 | 23.47 | 25.64 | 26.54 |
| C.V. ₂ | 37.42 | 44.67 | 68.78 | 45.66 |

† denotes significant value of 't'.

†† The data of number of doctors per 1,00,000 population for 1981 was not available and so that of 1977 has been used.

Table 17

Distribution of number of health centres per 1,00,000 for more and less industrialized districts of West Bengal : 1951-1981

| | 1951 | 1961 | 1971 | 1981 |
|-------------------|-------|--------|-------|-------|
| Mean ₁ | 0.54 | 1.44 | 2.13 | 3.42 |
| Mean ₂ | 0.66 | 2.01 | 2.34 | 2.50 |
| t | -0.66 | -2.19* | -0.31 | 0.50 |
| C.V. ₁ | 29.63 | 17.36 | 43.66 | 57.01 |
| C.V. ₂ | 54.00 | 24.38 | 14.10 | 18.40 |

*denotes significant value of 't'.

Table 18

Distribution of number of clinics and welfare centres per 1,00,000 population for more and less industrialized districts of West Bengal : 1951-1981

| | 1951 | 1961 | 1971 | 1981 |
|-------------------|-------|-------|-------|-------|
| Mean ₁ | 5.31 | 6.09 | 4.49 | 5.22 |
| Mean ₂ | 5.17 | 7.03 | 5.66 | 5.96 |
| t | 0.17 | -0.93 | -0.87 | -1.14 |
| C.V. ₁ | 32.96 | 19.54 | 11.80 | 28.54 |
| C.V. ₂ | 23.02 | 41.25 | 46.64 | 34.90 |

Table 19

Distribution of number of dispensaries per 1,00,000 population for more and less industrialized districts of West Bengal : 1951-1981

| | 1951 | 1961 | 1971 | 1981 |
|-------------------|------|------|-------|-------|
| Mean ₁ | 3.34 | 1.95 | 1.08 | 0.86 |
| Mean ₂ | 2.35 | 1.38 | 1.21 | 0.80 |
| t | 1.34 | 1.39 | -0.21 | -1.53 |

Table 19 (Continued)

| | | | | |
|-------------------|-------|-------|-------|-------|
| C.V. ₁ | 48.50 | 40.00 | 13.89 | 29.07 |
| C.V. ₂ | 42.98 | 50.00 | 95.89 | 97.50 |

Table 20

Distribution of beds per 1,00,000 population for more and less industrialized districts of West Bengal : 1951-1981

| | 1951 | 1961 | 1971 | 1981 |
|-------------------|-------|-------|-------|-------|
| Mean ₁ | 4.37 | 4.88 | 8.20 | 8.67 |
| Mean ₂ | 6.80 | 6.64 | 8.92 | 9.64 |
| t | -0.82 | -0.73 | -0.23 | -0.34 |
| C.V. ₁ | 11.90 | 16.39 | 20.98 | 19.61 |
| C.V. ₂ | 85.74 | 70.93 | 67.15 | 57.47 |

Table 21

Distribution of number of primary schools per 1,00,000 population for more and less industrialized districts of West Bengal : 1951-1981

| | 1951 | 1961 | 1971 | 1981 |
|-------------------|--------|-------|--------|-------|
| Mean ₁ | 56.64 | 78.34 | 82.11 | 79.72 |
| Mean ₂ | 73.33 | 92.34 | 108.51 | 99.84 |
| t | -2.84† | -0.76 | -2.13 | -1.55 |
| C.V. ₁ | 5.86 | 7.33 | 7.14 | 12.09 |
| C.V. ₂ | 15.53 | 39.19 | 22.30 | 25.02 |

† indicates significant value of 't'.

Table 22

Distribution of number of middle schools per 1,00,000 population for more and less industrialized districts of West Bengal : 1951-1981

| | 1951 | 1961 | 1971 | 1981 |
|-------------------|-------|-------|-------|-------|
| Mean ₁ | 6.00 | 6.65 | 71.18 | 6.74 |
| Mean ₂ | 7.16 | 5.84 | 6.21 | 6.46 |
| t | -0.74 | -0.91 | 1.67 | 0.34 |
| C.V. ₁ | 7.50 | 8.72 | 11.56 | 4.45 |
| C.V. ₂ | 42.73 | 29.62 | 16.91 | 24.77 |

Table 23

Distribution of number of high schools per 1,00,000 population for more and less industrialized districts of West Bengal : 1951-1981

| | 1951 | 1961 | 1971 | 1981 |
|-------------------|-------|-------|-------|-------|
| Mean ₁ | 6.40 | 4.39 | 5.73 | 7.78 |
| Mean ₂ | 3.95 | 3.63 | 4.81 | 6.48 |
| t | 4.30† | 1.25 | 1.37 | 1.73 |
| C.V. ₁ | 7.19 | 8.20 | 13.96 | 8.10 |
| C.V. ₂ | 27.85 | 32.78 | 25.99 | 22.22 |

†denotes significant value of 't'.

Table 24

Distribution of number of teachers per 1,00,000 population for more and less industrialized districts of West Bengal

| | 1951 | 1961 | 1971 | 1981 |
|-------------------|--------|--------|--------|--------|
| Mean ₁ | 286.40 | 403.80 | 479.80 | 496.30 |
| Mean ₂ | 263.80 | 354.60 | 532.00 | 472.90 |

Table 24 (Continued)

| | | | | |
|-------------------|-------|-------|-------|-------|
| t | 0.80 | 1.34 | 0.71 | 4.4 |
| C.V. ₁ | 11.52 | 7.80 | 22.68 | 17.37 |
| C.V. ₂ | 19.67 | 19.68 | 23.13 | 19.60 |

Table 25

Per capita expenditure on education for more and less industrialized districts of West Bengal 1951-1981

| | 1951 | 1961 | 1971 | 1981 |
|-------------------|-------|-------|-------|--------|
| Mean ₁ | 3.10 | 7.36 | 15.91 | 36.05 |
| Mean ₂ | 2.35 | 5.74 | 14.06 | 27.05 |
| t | 1.70 | 0.86 | 0.48 | 3.77† |
| C.V. ₁ | 11.61 | 16.85 | 19.42 | 9.10 |
| C.V. ₂ | 36.17 | 45.99 | 30.51 | 11.04† |

† denotes significant value of 't'.

Table 26

Male-Female literacy rate for more and less industrialized districts of West Bengal 1951-1981

| | 1951 | 1961 | 1971 | 1981 |
|-------------------|---------------|-----------------|-------------|-------|
| A. | Male | Literacy | Rate | |
| Mean ₁ | 35.59 | 44.45 | 47.53 | 56.24 |
| Mean ₂ | 25.06 | 31.45 | 34.53 | 42.46 |
| t | 3.36† | 3.90† | 4.23† | 3.56† |
| C.V. ₁ | 9.91 | 7.47 | 5.91 | 6.40 |
| C.V. ₂ | 24.50 | 20.00 | 16.91 | 17.31 |
| B. | Female | Literacy | Rate | |
| Mean ₁ | 13.49 | 20.48 | 27.20 | 36.68 |
| Mean ₂ | 7.19 | 10.25 | 15.20 | 21.86 |
| t | 4.23* | 5.14* | 4.56* | 4.56* |
| C.V. ₁ | 17.27 | 9.03 | 10.33 | 8.23 |
| C.V. ₂ | 35.33 | 36.88 | 32.43 | 28.27 |

* denotes significant value of 't'.

Table 27

Infant death rate per 1,000 live births for more and less industrialized districts of West Bengal : 1951-1981

| | 1951 | 1961 | 1971 | 1981 |
|-------------------|--------|-------|-------|-------|
| Mean ₁ | 109.15 | 68.08 | 41.15 | 38.43 |
| Mean ₂ | 101.78 | 53.00 | 42.79 | 42.62 |
| t | 0.48 | 1.73 | -0.31 | -0.41 |
| C.V. ₁ | 28.35 | 28.17 | 22.45 | 37.63 |
| C.V. ₂ | 11.96 | 25.62 | 16.92 | 43.41 |

Appendix A₁

Distribution of Health Facilities per one lakh population over the 16 districts from 1951 to 1981

| Districts | 1951 | | | | | 1961 | | | | |
|---------------|---------|----------------|---------|-------------------|------------------|---------|-------------------|---------|-------------------|------------------|
| | Doctors | Health Centres | Clinics | Dispen- saries | Hospital beds | Doctors | Health Centres | Clinics | Dispen- saries | Hospital beds |
| Calcutta | 246.10 | - | 2.48 | 1.00 | 12.50 | 234.90 | - | 6.18 | 1.61 | 33.49 |
| Howrah | 48.80 | 0.50 | 4.34 | 1.68 | 3.67 | 43.60 | 1.62 | 5.64 | 1.03 | 4.73 |
| 24-Parganas | 30.40 | 0.45 | 3.52 | 1.95 | 2.72 | 22.60 | 1.05 | 4.52 | 1.34 | 3.74 |
| Hooahly | 50.80 | 0.81 | 8.16 | 5.61 | 3.13 | 39.70 | 1.70 | 7.80 | 2.87 | 5.97 |
| Burdwan | 62.00 | 0.41 | 5.20 | 4.11 | 3.93 | 44.20 | 1.40 | 6.39 | 2.56 | 5.08 |
| Darjeeling | 42.00 | 0.65 | 7.18 | 0.87 | 3.44 | 26.70 | 3.04 | 15.37 | 1.47 | 19.82 |
| Nadia | 42.00 | 0.79 | 5.94 | 4.20 | 11.48 | 27.10 | 2.39 | 7.12 | 1.40 | 7.22 |
| Midnapore | 22.70 | 0.41 | 4.14 | 1.61 | 5.36 | 17.90 | 1.20 | 4.56 | 0.52 | 8.67 |
| Purulia | × | × | × | × | × | 1.400 | 1.75 | 4.68 | 1.15 | 4.22 |
| Birbhum | 35.10 | 1.49 | 7.15 | 3.77 | 4.66 | 27.00 | 2.06 | 8.02 | 2.35 | 6.30 |
| Bankura | 34.00 | 0.61 | 4.47 | 1.97 | 8.11 | 29.40 | 2.56 | 6.85 | 2.40 | 9.47 |
| West Dinajpur | 24.80 | 0.31 | 4.25 | 2.56 | 1.35 | 18.50 | 1.89 | 5.67 | 2.04 | 2.43 |
| Murshidabad | 22.50 | 0.53 | 4.30 | 2.68 | 4.88 | 16.90 | 1.75 | 5.47 | 1.22 | 4.12 |
| Jalpaiguri | 48.50 | 0.44 | 5.30 | 1.75 | 4.10 | 29.50 | 1.62 | 5.00 | 0.88 | 3.69 |
| Cooch Behar | 12.70 | - | 5.38 | - | 3.38 | 8.10 | 2.06 | 6.47 | 0.10 | 3.72 |
| Malda | 17.40 | 0.75 | 3.63 | 1.71 | 2.47 | 14.10 | 1.96 | 8.21 | 1.72 | 3.38 |

Appendix A₁ (Continued)

| Districts | 1971 | | | | | 1981 | | | | |
|---------------|---------|----------------|---------|---------------|---------------|---------|----------------|---------|---------------|---------------|
| | Doctors | Health Centres | Clinics | Dispen-saries | Hospital-beds | Doctors | Health Centres | Clinics | Dispen-saries | Hospital-beds |
| Calcutta | 321.90 | - | 5.84 | 0.99 | 37.96 | 328.00 | - | 6.53 | 1.61 | 43.28 |
| Howrah | 51.50 | 1.74 | 4.72 | 1.24 | 9.39 | 45.30 | 1.76 | 4.73 | 1.05 | 8.40 |
| 24-Parganas | 23.40 | 1.21 | 3.93 | 0.84 | 5.62 | 20.00 | 1.20 | 3.37 | 0.64 | 6.18 |
| Hooghly | 45.10 | 1.88 | 5.26 | 1.07 | 7.70 | 40.20 | 5.35 | 5.28 | 1.16 | 9.23 |
| Burdwan | 43.30 | 3.67 | 4.06 | 1.18 | 10.08 | 37.80 | 5.37 | 7.51 | 0.66 | 10.92 |
| Darjeeling | 27.60 | 2.56 | 13.43 | 4.73 | 22.88 | 23.20 | 2.19 | 5.28 | 3.18 | 23.77 |
| Nadia | 25.90 | 2.43 | 5.17 | 1.08 | 18.94 | 21.00 | 2.22 | 11.73 | 0.77 | 16.53 |
| Midnapore | 19.20 | 2.09 | 4.00 | 0.06 | 7.33 | 17.10 | 3.18 | 4.76 | 0.22 | 8.63 |
| Purulia | 5.30 | 2.37 | 4.37 | 0.78 | 5.64 | 5.20 | 2.01 | 5.86 | 0.63 | 5.40 |
| Birbhum | 28.30 | 2.76 | 5.88 | 1.18 | 7.92 | 25.70 | 3.10 | 4.96 | 0.43 | 7.74 |
| Bankura | 35.00 | 3.15 | 7.39 | 0.64 | 9.96 | 32.10 | 3.37 | 3.01 | 0.63 | 4.07 |
| West Dinajpur | 15.30 | 2.20 | 4.36 | 1.13 | 3.07 | 12.50 | 2.21 | 7.07 | 0.83 | 4.44 |
| Murshidabad | 15.90 | 2.00 | 4.17 | 0.54 | 5.30 | 13.60 | 2.43 | 4.91 | 0.41 | 7.95 |
| Jalpaiguri | 67.60 | 2.00 | 4.91 | 1.03 | 7.43 | 21.50 | 2.04 | 6.11 | 0.91 | 9.71 |
| Cooch Behar | 8.10 | 2.19 | 4.67 | 0.99 | 5.54 | 7.10 | 2.26 | 5.87 | 0.40 | 5.67 |
| Malda | 12.80 | 2.17 | 3.91 | 1.18 | 4.11 | 11.20 | 2.51 | 5.21 | 0.39 | 5.11 |

Appendix A2

Distribution of Educational Facilities per one lakh population over the 16 districts from 1951 to 1981

| Districts | 1951 | | | | 1961 | | | | | |
|---------------|--------------------|-------------------|-----------------|----------|---|--------------------|-------------------|-----------------|----------|---|
| | Primary Schools | Middle Schools | High Schools | Teachers | Per capita Expen- diture (in Rs.) | Primary Schools | Middle Schools | High Schools | Teachers | Per capita Expen- diture (in Rs.) |
| Calcutta | 16.97 | 1.11 | 7.12 | 248.20 | 12.50 | 79.59 | 6.88 | 5.09 | 338.20 | 26.32 |
| Howrah | 52.63 | 5.83 | 6.52 | 282.80 | 3.67 | 71.28 | 6.28 | 3.83 | 414.40 | 7.90 |
| 24-Parganas | 55.25 | 5.34 | 6.10 | 235.00 | 2.72 | 79.61 | 7.61 | 4.36 | 385.80 | 5.57 |
| Hooghly | 61.74 | 6.42 | 7.10 | 305.50 | 3.13 | 86.86 | 6.59 | 4.84 | 49.30 | 6.99 |
| Burdwan | 56.94 | 6.39 | 5.87 | 322.80 | 2.87 | 85.59 | 6.10 | 4.51 | 365.70 | 8.96 |
| Darjeeling | 75.93 | 6.96 | 4.79 | 277.80 | 3.44 | 77.96 | 5.12 | 4.00 | 328.00 | 5.88 |
| Nadia | 75.34 | 4.02 | 5.32 | 331.60 | 3.39 | 93.42 | 6.30 | 4.03 | 482.80 | 6.81 |
| Midnapore | 92.41 | 6.58 | 5.60 | 338.60 | 2.74 | 126.37 | 8.73 | 3.48 | 446.30 | 7.54 |
| Purulia | × | × | × | × | × | 149.04 | 6.62 | 5.07 | 350.30 | 3.74 |
| Birbhum | 75.78 | 8.74 | 3.87 | 318.20 | 3.33 | 97.84 | 7.33 | 4.08 | 409.20 | 13.10 |
| Bankura | 82.10 | 6.44 | 4.70 | 272.30 | 1.99 | 134.39 | 6.67 | 4.09 | 418.80 | 5.42 |
| West Dinajpur | 56.30 | 4.61 | 1.84 | 168.90 | 1.03 | 101.00 | 7.71 | 2.87 | 318.40 | 4.28 |
| Murshidabad | 56.83 | 4.20 | 3.67 | 215.00 | 1.80 | 68.62 | 4.50 | 2.23 | 279.80 | 4.65 |
| Jalpaiguri | 75.70 | 4.91 | 2.95 | 248.80 | 1.97 | 75.99 | 4.56 | 2.79 | 274.20 | 4.44 |
| Cooch Behar | 82.96 | 13.01 | 3.44 | 239.60 | × | 82.56 | 2.55 | 5.86 | 216.90 | 3.67 |
| Malda | 59.94 | 6.29 | 3.31 | 226.80 | 1.47 | 85.11 | 4.19 | 1.47 | 316.20 | 3.60 |

Appendix A₂ (Continued)

1971

1981

| Districts | Primary Schools | Middle Schools | High Schools | Teachers | Per capita Expen- diture (in Rs.) | Primary Schools | Middle Schools | High Schools | Teachers | Per capita Expen- diture (in Rs.) |
|---------------|--------------------|-------------------|-----------------|----------|---|--------------------|-------------------|-----------------|----------|---|
| Calcutta | 72.16 | 7.21 | 7.90 | 352.40 | 21.05 | 85.79 | 3.02 | 4.32 | 821.00 | 58.52 |
| Howrah | 72.63 | 6.76 | 8.15 | 507.20 | 37.17 | 87.08 | 7.12 | 4.43 | 555.80 | 20.40 |
| 24-Parganas | 39.43 | 3.74 | 10.60 | 540.80 | 35.21 | 72.79 | 8.65 | 6.45 | 556.60 | 11.66 |
| Hoochly | 78.17 | 6.68 | 8.34 | 557.80 | 40.44 | 87.15 | 6.13 | 5.71 | 293.80 | 15.79 |
| Burdwan | 95.91 | 6.38 | 6.72 | 567.70 | 31.39 | 81.43 | 7.02 | 6.31 | 512.80 | 15.80 |
| Darjeeling | 94.29 | 4.57 | 6.46 | 546.50 | 27.71 | 90.18 | 4.48 | 4.22 | 828.40 | 23.18 |
| Nadia | 78.20 | 6.05 | 6.58 | 513.90 | 34.16 | 148.48 | 7.06 | 5.76 | 671.70 | 15.11 |
| Midnapore | 113.00 | 10.25 | 8.66 | 577.00 | 23.97 | 117.82 | 8.15 | 6.26 | 683.70 | 18.69 |
| Purulia | 53.50 | 6.85 | 5.34 | 495.80 | 18.78 | 160.52 | 6.36 | 4.37 | 360.10 | 12.28 |
| Birbhum | 103.02 | 6.35 | 9.12 | 577.60 | 25.02 | 96.29 | 6.70 | 6.98 | 563.50 | 17.88 |
| Bankura | 37.98 | 8.51 | 8.09 | 619.20 | 33.18 | 131.71 | 6.70 | 6.50 | 586.90 | 15.21 |
| West Dinajpur | 101.55 | 5.53 | 4.79 | 437.00 | 26.40 | 100.59 | 5.16 | 3.93 | 397.50 | 9.42 |
| Murshidabad | 74.83 | 5.19 | 5.78 | 456.40 | 28.34 | 88.85 | 5.13 | 4.04 | 410.70 | 10.38 |
| Jalpaiguri | 72.49 | 4.89 | 4.89 | 330.80 | 31.42 | 87.25 | 5.54 | 3.09 | 547.10 | 13.50 |
| Cooch Behar | 87.32 | 6.99 | 5.36 | 395.10 | 23.85 | 94.19 | 7.28 | 4.10 | 398.20 | 9.04 |
| Malda | 82.01 | 6.04 | 6.19 | 375.03 | 24.73 | 97.36 | 5.71 | 3.66 | 514.20 | 9.97 |

Appendix A3
Literacy Rate and Infant Mortality Rate over sixteen
districts of West Bengal from 1951 to 1981

| Districts | 1951 | | | | 1961 | | | | 1971 | | | | 1981 | | | |
|---------------|--------|-------|--------|------|--------|-------|--------|------|--------|-------|--------|------|--------|-------|--------|------|
| | Infant | | Female | | Infant | | Female | | Infant | | Female | | Infant | | Female | |
| | Death | Male | Lite- | racy | Death | Male | Lite- | racy | Death | Male | Lite- | racy | Death | Male | Lite- | racy |
| | Rate | Rate | Rate | Rate | Rate | Rate | Rate | Rate | Rate | Rate | Rate | Rate | Rate | Rate | Rate | Rate |
| Calcutta | 203.00 | 58.69 | 43.45 | | 116.03 | 63.60 | 52.30 | | 79.02 | 64.10 | 54.40 | | 95.09 | 73.20 | 63.10 | |
| Howrah | 161.60 | 37.64 | 16.92 | | 100.70 | 48.40 | 22.70 | | 41.40 | 50.50 | 28.70 | | 38.70 | 66.73 | 40.85 | |
| 24-Parganas | 86.40 | 39.16 | 13.25 | | 56.10 | 43.90 | 19.30 | | 51.01 | 48.40 | 27.10 | | 60.20 | 55.41 | 35.40 | |
| Hooghly | 86.50 | 35.77 | 13.44 | | 52.70 | 46.10 | 21.80 | | 26.30 | 48.30 | 28.20 | | 35.10 | 50.92 | 33.80 | |
| Burdwan | 102.10 | 29.80 | 10.34 | | 62.80 | 39.40 | 18.10 | | 45.80 | 42.90 | 24.80 | | 35.70 | 51.58 | 32.38 | |
| Darjeeling | 96.80 | 31.39 | 9.21 | | 44.60 | 40.10 | 15.10 | | 27.00 | 41.80 | 23.20 | | 19.70 | 57.89 | 38.79 | |
| Nadia | 104.30 | 28.71 | 12.95 | | 44.80 | 35.80 | 18.20 | | 37.21 | 38.60 | 23.60 | | 34.90 | 43.14 | 29.40 | |
| Midnapore | 79.50 | 36.64 | 9.06 | | 52.90 | 23.50 | 8.40 | | 48.90 | 31.10 | 12.40 | | 41.80 | 55.32 | 29.73 | |
| Purulia | | 24.87 | 5.98 | | 59.20 | 31.40 | 9.30 | | 46.30 | 37.60 | 14.50 | | 28.80 | 45.58 | 13.34 | |
| Birbhum | 117.10 | 27.57 | 7.50 | | 77.00 | 32.40 | 11.50 | | 37.40 | 45.60 | 19.40 | | 32.50 | 43.03 | 24.21 | |
| Bankura | 92.70 | 27.28 | 6.94 | | 58.00 | 36.20 | 9.70 | | 35.50 | 17.40 | 32.50 | | 28.80 | 49.40 | 23.10 | |
| West Dinajpur | 120.80 | 18.88 | 5.41 | | 20.50 | 30.20 | 5.00 | | 43.00 | 31.10 | 11.90 | | 26.80 | 36.13 | 17.08 | |
| Murshidabad | 92.40 | 19.60 | 6.33 | | 48.80 | 27.10 | 10.00 | | 38.70 | 32.00 | 15.00 | | 31.60 | 32.35 | 17.30 | |
| Jalpaiguri | 105.80 | 21.36 | 6.11 | | 65.40 | 26.00 | 7.20 | | 40.70 | 34.30 | 8.30 | | 94.00 | 38.48 | 20.44 | |
| Cooch Behar | - | 29.91 | 4.78 | | 54.20 | 41.70 | 12.20 | | 53.20 | 26.70 | 12.20 | | 34.90 | 39.99 | 19.30 | |
| Malda | 106.60 | 15.29 | 3.65 | | 57.60 | 21.50 | 5.80 | | 47.80 | 25.50 | 9.30 | | 58.80 | 31.46 | 14.21 | |

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URBANIZATION AND INDUSTRIALIZATION IN WEST BENGAL

Sudeshna Ghosh Roy

I Introduction

K. V. Sundaram constructed a model of the dynamics of urban growth which tells us how the towns grow under different conditions and throws light on the determinants and sources of growth at the various stages of development.¹ The study, based on a case study of Meerut city, reveals that manufacturing and tertiary activities significantly explain urban growth but not those related to the service sector.

Studies conducted in Japan by the United Nations Centre For Regional Development at Nagoya have established that the increase in industrial employment is a *sine qua non* for urban growth up to a given size of 2,50,000 population.² In this study we propose to analyse the urbanization process in two contrasting regions of West Bengal; the developed region of Twenty-four Parganas, Howrah and Hooghly districts located near Calcutta and the four backward districts located in the western part of the state-Midnapore, Purulia, Bankura and Birbhum.

II Economic Profile of the Two Regions

We begin with a brief economic outline of those two regions. Region I (24 Parganas, Howrah and Hooghly) accounts for a number of large medium and small industries such as jute mills, textile industry, metal products, chemical works, handlooms, small scale engineering industries etc. In 1952, 54.5% of the total number of registered factories in West Bengal were situated in those three districts. By 1970 the number increased by about 15% to 69.4% and employment in the registered factories also increased (Table 1). Twenty-four Parganas, Howrah and Hooghly abound in potential entrepreneurs with ability to invest and appear to have a favourable industrial

climate for further development. Proximity to the port, supply of skilled labour, better transportation system and banking service stimulate industrialization. Another factor conducive to growth is the nearness of Calcutta, a potential market. The districts closer to Calcutta have as their main industries chemical, leather, engineering, potteries, jute, paper, printing press etc. In Howrah, the main industries are ship building, ship repairing, cotton textile, jute, and engineering. In West Bengal, Howrah is the most industrialized district. According to the 1961 Census, after Calcutta, Howrah and Hooghly are the most densely populated districts.

In no other district in West Bengal except Howrah is the proportion of persons engaged in industrial occupation so large as in Hooghly. In the Hooghly district, the jute and cotton mills are the oldest industrial units, the former employing as a group the largest number of people. The large scale industries are all located along the bank of the Bhagirathi from Uttarpara to Triveni as the area is well served by road, rail and river transport connecting it with the great market and port city of Calcutta. Small scale industries consist of rice mills, cold storage, automobile servicing, machine components, non-ferrous and alloy castings etc. In contrast, in Region II, the level of industrial activities is low, while whatever industries exist are usually of the traditional variety. In Birbhum and Bankura the traditional industries are brass, bell metal, pottery, silk weaving etc. Among the new industries cycle repairing, tailoring, automobile repairing shops, lathe machine shops are important. In Purulia brass, bell metal, cutlery, food processing, bidi making, chemical products and manufacture of metal products are the principal industries. These are mostly small scale industries. In spite of its close proximity to Tatanagar, the district continues to be a backward one. In Midnapore district, Kharagpur city is industrially developed and accounts for engineering industries. Other principal industries in the district are cotton weaving (Ramjibanpur), brass and bell metal (Chandrokona), bidi making etc. The dearth of raw materials, virtual absence of marketing arrangements, difficulties in communication and transportation of finished products and non-availability of electricity at cheap rate are the main constraints in the spread of industrialization in the four districts of Region II.

However, the introduction of mechanical and electric power in recent times has led to the rise of new industries such as rice and oil milling and other industrial enterprises requiring cheap power.

In Region I most of the towns are industrial towns where 40% of the total workers are engaged in industrial activities, while in Region II only one town is industrial town where more than 40% workers are engaged in industry (see Table 2).

In Region II the tertiary activities (trade, commerce, transport and construction) are more in evidence. The small and medium size towns in Bankura, Birbhum, Midnapore and Purulia are surrounded by agricultural hinterland and 79.5% of the workers in those districts are engaged in agriculture, either as cultivators or as agricultural labourers (Table 3).

The Census data show that in the urban area of Region II, the share of trade and commerce in total establishments is much higher than the share of the non-household industrial sector (Table 4). From the Table 4, we observe that in terms of the shares of tertiary establishments (trade, commerce) and industrial establishments (non-household industry) in the urban area, the two regions are not that different. However, the difference lies in the respective sizes of their industrial establishments. In Region II the number of large scale industries is very low. Only the small scale industries like brass and bell metal, cotton weaving, pottery, bidi making, cutlery etc. have developed. But Region I accounts for a number of large, medium and small industries such as jute mills, textile industry, chemical works, metal products, handlooms, engineering industries etc. Table 5 shows that three of the districts in Region II have no workshop in the 300 to 499 category, while the region accounts for only 1.38% of the urban establishments with more than 500 persons working compared to 60.55% of the three districts of Region I.

Proximity to Calcutta and port, a potential market for goods, supply of skilled labour, better transportation and banking services facilitate industrialization in Region I. But in an underdeveloped area like Region II, without the benefit of industrialization, only consumption-oriented trade can spread to market the agriculture surplus and to buy industrial goods in exchange. For all these reasons, in Region II, tertiary activities (trade, transport, construction, commerce) play the significant role in the process of urbanization while in Region I industrial activities (household and non-household) induce urban growth significantly.

On the basis of above discussion it might be hypothesized that there is a significant difference in the process of urban growth

between the two regions of West Bengal. While urban growth in Region I is mainly related to industrial development, that in Region II is strongly linked with trading and service activities.

III Methodology and Analysis

In this study, urban growth is measured by the percentage increase in urban population during 1961 and 1971³.

As stated above, to analyse the process of growth, we have chosen the following two regions of West Bengal :

Region I : Twenty-four Parganas, Howrah, Hooghly.

Region II : Bankura, Birbhum, Midnapore, Purulia.

In our cross-section study, the units of observations are the municipal and non-municipal towns in the two regions. In Region I, we have 75 towns and in Region II the number of towns is 26. We have the following four variables:

Y : The dependent variable, indicates population growth in the towns measured by the percentage increase in the district urban population during 1961-1971.

X_2 : Percentage increase in industrial employment during 1961-1971.

X_3 : Percentage increase in employment in tertiary sector (trade and commerce, transport and construction) during 1961-1971.

X_4 : Percentage increase in employment in service sector during 1961-1971.⁴

The data on all the four variables have been obtained from the Census of India publications.

Two separate sets of multiple linear regression equations are calculated for the two regions and their processes of urban growth are compared.

The estimated regression equation for Region I is given by :

$$Y = 33.66 + 0.17X_2 + 0.01X_3 + 0.03X_4$$

| | | | |
|------------|--------|--------|--------|
| S.E. | (0.05) | (0.03) | (0.03) |
| t : | 3.28 | 0.30 | 1.21 |
| R^2 | = 0.20 | | |
| $F_{3,71}$ | = 5.61 | | |

To see whether urban growth is explained significantly by the regre-

ssion in Region I, the significance of the regression has been tested and the calculated value of $F_{3,71}$ was found to be greater than the tabulated value. It implies that activities related to industry, trade and service could explain urban growth significantly in Region I during the decade 1961-71. The value of R^2 is low; it shows that about one fifth of the variation in urbanization level is explained by the three explanatory variables in the equation.

Another finding is that β_3 and β_4 (coefficients of X_3 and X_4 respectively) are insignificant at 5% level of significance. It implies that, in Region I activities related to trade and service could not explain urban growth significantly. But β_2 is positive and significant at 5% level of significance. This result shows that in Region I during the decade 1961-1971 activities related to industry explained urban growth significantly and in positive direction.

From the Table 6, we find that the correlation coefficient between X_3 and X_4 is high (0.50). It implies that in Region I, trade and service are to some extent closely associated. So, to avoid the problem of multicollinearity, variable X_3 is dropped and Y is regressed on X_2 and X_4 . The regression equation is given by :

$$Y = 33.83 + 0.18X_2 + 0.03X_4$$

$$\text{S.E.} \quad \quad \quad (0.05) \quad (0.02)$$

$$t : \quad \quad \quad 3.49 \quad 1.56$$

$$R^2 = 0.18$$

$$F_{2,71} = 8.48$$

However, the result does not change much after dropping the explanatory variable X_3 . As before, X_2 appears to be significantly affecting urban growth while X_4 continues to show lack of statistical significance and the value of R^2 is reduced only marginally.

The estimated regression equation for the Region II (Bankura, Birbhum, Midnapore, Purulia) is as follows :

$$Y = 24.24 + 0.10X_2 + 0.19X_3 - 0.01X_4$$

$$\text{S.E.} \quad \quad \quad (0.11) \quad (0.10) \quad (0.10)$$

$$t : \quad \quad \quad 0.87 \quad 1.93 \quad -0.05$$

$$R^2 = 0.29$$

$$F_{3,22} = 3.07$$

Here, the calculated value of F is found to be greater than the tabulated value at 5% level of significance. This shows that the industrial activities together with tertiary activities (trade, commerce, transport, construction) significantly explain urban growth in Region II during the decade 1961-1971. The value of

$R^2 (= 0.29)$ is low; though higher than the figure, in the case of Region I. In Region II the signs of β_2 and β_3 are found to be positive while the sign of β_4 is negative. But values of β_2 and β_4 are statistically insignificant at 5% level of significance. Given that β_4 is statistically insignificant, its wrong sign need not be taken seriously. β_3 is positive and significant at 5% level of significance. So in Region II, only the activities related to trade explain urban growth significantly in positive direction.

Table 7, shows the relatively high degree of association between X_2 and X_3 (0.47). So, to avoid multi-collinearity the variable X_2 is dropped and Y is regressed on X_3 and X_4 . The regression equation is now given by :

$$\begin{array}{rcl}
 Y & = & 23.30 + 0.23X_3 - 0.02X_4 \\
 \text{S.E.} & & (0.08) \quad (0.09) \\
 t & & 2.81 \quad -0.28 \\
 R^2 & = & 0.27 \\
 F_{2,22} & = & 4.27
 \end{array}$$

The value of $R^2 (= 0.27)$ drops marginally. However X_3 continues to be statistically significant, which shows that in Region II, activities related to trade and commerce, transport and construction induced urban growth significantly during the decade 1961-1971.

Thus, the exercises undertaken confirm the hypotheses about diverse patterns of urban development in the more and less developed regions of West Bengal. While industrial activities are the prime cause of urban growth in Region I, in Region II, trading activities appear to be the dominant factor. However, in both cases low R^2 values indicate that these factors account only 20% to 29% of the variations in urban growth, while there are other important factors which have not been considered by our equations.

Table 1

**Share of the Selected Districts in Registered Working
Factories of West Bengal (in percentage)**

| Districts | Y E A R | | |
|----------------------|---------|------|------|
| | 1952 | 1969 | 1970 |
| Region I | | | |
| Twenty-four Parganas | 33.5 | 45.3 | 44.0 |
| Howrah | 17.0 | 20.8 | 20.9 |
| Hooghly | 4.0 | 4.0 | 4.5 |
| Region II | | | |
| Bankura | 1.5 | 1.3 | 1.4 |
| Birbhum | 2.0 | 1.3 | 1.4 |
| Midnapore | 2.5 | 1.9 | 1.8 |
| Purulia | 2.5 | 1.9 | 1.8 |

Source : Government of West Bengal, Economic Review, 1966-67,
1972-73.

Table 2

**Distribution of Towns in Region I and Region II
by Percentage of Workers Engaged in Industrial
Activity in 1971**

| Percentage of workers in industrial activity | Number of Towns | |
|---|-----------------|-----------|
| | Region I | Region II |
| Less than 40% | 36 | 25 |
| 40% to 60% | 16 | 1 |
| 60% and above | 23 | 0 |
| Total | 75 | 26 |

Table 3
**Percentage of Workers Engaged in Agriculture Activity in
the Districts, 1971**

| Districts | Percentage |
|----------------------|--------------|
| Region I | |
| Twenty-four Parganas | 91.97 |
| Howrah | 32.52 |
| Hooghly | 54.98 |
| Region II | |
| Bankura | 81.96 |
| Birbhum | 79.29 |
| Midnapore | 80.41 |
| Purulia | 78.62 |
| West Bengal | 58.43 |

Source : Census of India, 1971; Series 22 (West Bengal), *District Census Handbook* for Bankura, Birbhum, Midnapore, Purulia, Twenty four Parganas, Howrah and Hooghly.

Table 4
**Distribution of Trading Establishments (Trade & Commerce) and Industrial Establishments (non-household)
as Percentage of Total Establishment in Urban Area,
1971**

| Districts | Industrial Establishment | Trading (whole sale and retail) Establishment |
|----------------------|-----------------------------|---|
| Region I | | |
| Twenty-four Parganas | 20.68 | 45.23 |
| Howrah | 27.79 | 39.25 |
| Hooghly | 20.74 | 43.69 |
| Region II | | |
| Bankura | 19.08 | 33.99 |
| Birbhum | 23.21 | 44.59 |
| Midnapore | 16.98 | 44.03 |
| Purulia | 18.50 | 41.07 |

Source : Census of India, 1971, Series 22, (West Bengal) Pt. 3A
Establishment Tables.

Table 5

Distribution of the Total Manufacturing and Related Factories in the Employment Size Groups '300 to 499' and '500 and above' in Urban West Bengal in 1971

| Districts | 300 to 499 | 500 and above |
|--------------------------|--------------|---------------|
| Region I | | |
| Twenty-four Parganas (U) | 36 (35.29) | 61 (27.98) |
| Howrah (U) | 18 (16.65) | 48 (22.02) |
| Hooghly (U) | 8 (7.84) | 23 (10.55) |
| Region II | | |
| Bankura (U) | 0 (0.00) | 0 (0.00) |
| Birbhum (U) | 0 (0.00) | 1 (0.46) |
| Midnapore (U) | 0 (0.00) | 1 (0.46) |
| Purulia (U) | 1 (0.98) | 1 (0.46) |
| West Bengal (Urban) | 102 (100.00) | 218 (100.00) |

Note : Figures in the brackets are percentages.

Source : Census of India, 1971, Series 22, (West Bengal), Pt. 3A, *Establishment Tables*.

Table 6

Correlation Matrix for Region I (Twenty-four Parganas, Howrah, Hooghly)

| | Y | X ₂ | X ₃ | X ₄ |
|----------------|------|----------------|----------------|----------------|
| Y | 1.00 | 0.40 | 0.22 | 0.23 |
| X ₂ | 0.40 | 1.00 | 0.29 | 0.16 |
| X ₃ | 0.22 | 0.29 | 1.00 | 0.50 |
| X ₄ | 0.23 | 0.16 | 0.50 | 1.00 |

Table 7

Correlation Matrix for Region II (Bankura, Birbhum, Midnapore, Purulia)

| | Y | X ₂ | X ₃ | X ₄ |
|----------------|------|----------------|----------------|----------------|
| Y | 1.00 | 0.39 | 0.51 | 0.13 |
| X ₂ | 0.39 | 1.00 | 0.47 | -0.03 |
| X ₃ | 0.51 | 0.47 | 1.00 | 0.35 |
| X ₄ | 0.13 | -0.03 | 0.35 | 1.00 |

Appendix I

Data-Matrix for Region I (Twenty-Four Parganas, Howrah and Hooghly)

| Town | Percentage change in urban popula- tion during 1961-1971 Y | Percentage change in industrial employment during 1961-1971 X_2 | Percentage change in employment in tertiary sector during 1961-1971 X_3 | Percentage change in employment in service sector during 1961-1971 X_4 |
|-----------------------------|--|---|---|--|
| (1) | (2) | (3) | (4) | (5) |
| Twenty-four Parganas | | | | |
| 1. Kanchrapara | 14.35 | -24.79 | -2.10 | 68.88 |
| 2. Halisahar | 33.99 | 19.84 | 24.36 | 24.28 |
| 3. Naihati | 40.41 | 19.42 | 7.17 | -11.08 |
| 4. Bhatpara | 38.69 | 38.05 | 1.54 | -25.65 |
| 5. Garulia | 52.44 | 33.85 | 35.26 | 37.00 |
| 6. North Barrackpore | 34.67 | 34.14 | 121.84 | 40.70 |
| 7. Titagarh | 15.42 | 2.11 | -3.25 | -23.26 |
| 8. Khardah | 13.89 | -3.69 | 13.12 | -12.57 |
| 9. Barrackpore | 51.42 | 31.37 | 9.32 | 27.69 |
| 10. Panihati | 57.92 | -4.09 | 24.55 | 166.50 |
| 11. Kamarhati | 35.03 | -1.77 | 3.38 | 25.16 |
| 12. Baranagar | 26.90 | 5.14 | 21.11 | 37.48 |
| 13. Garden reach | 18.46 | -3.03 | 3.45 | -59.03 |
| .. Budge Budge | 28.16 | -17.38 | -48.49 | -25.99 |

Appendix I (Continued)

| Town. | Percentage change in urban population during 1961-1971 | Percentage change in industrial employment during 1961-1971 | Percentage change in employment in tertiary sector during 1961-1971 | Percentage change in employment in service sector during 1961-1971 |
|----------------------------|--|---|---|--|
| | Y | X ₂ | X ₃ | X ₄ |
| (1) | (2) | (3) | (4) | (5) |
| 15. South Suburbun | 46.71 | -0.82 | 40.52 | 47.25 |
| 16. Jadavpur | 113.98 | -61.53 | -13.38 | 26.52 |
| 17. Barasat | 45.63 | 32.47 | 662.40 | 385.55 |
| 18. New Barrackpore | 55.78 | 49.72 | 33.46 | 81.77 |
| 19. North Dum Dum | 67.47 | 52.44 | 71.13 | 53.41 |
| 20. Dum Dum | 56.49 | 16.73 | 73.89 | 21.53 |
| 21. South Dum Dum | 56.66 | 25.85 | 59.67 | 65.57 |
| 22. Habra | 44.24 | 169.91 | 68.83 | 41.71 |
| 23. Madhyamgram | 71.12 | 61.46 | 84.07 | 29.87 |
| 24. Nabapally | 54.83 | 105.57 | 63.25 | 35.23 |
| 25. Deulpara | 48.59 | 33.13 | 29.76 | 26.29 |
| 26. Ichapur Defence Estate | -3.43 | -0.12 | -33.20 | -43.94 |
| 27. Purba Putiari | 37.43 | 51.64 | 32.51 | 10.64 |
| 28. Birlapur | 38.31 | 40.24 | 17.62 | 14.39 |

Appendix I (Continued)

| Town | Percentage change in urban popula- tion during 1961-1971 | Percentage change in industrial employment during 1961- 1971 | Percentage change in employment in tertiary sector during 1961- 1971 | Percentage change in employment in service sector during 1961- 1971 |
|-----------------------|--|---|--|---|
| | Y | X ₂ | X ₃ | X ₄ |
| (1) | (2) | (3) | (4) | (5) |
| 29. Canning | 48.75 | 4.24 | 66.32 | -23.57 |
| 30. Panchur | 134.85 | 160.26 | 121.27 | 51.81 |
| 31. Nangi | 53.44 | 64.17 | 52.85 | -23.28 |
| 32. Barrackpore Cant | 48.00 | 39.87 | 31.91 | -8.39 |
| 33. Kasba | 47.56 | 24.14 | 51.98 | 804.66 |
| 34. Garfa | 156.62 | 161.83 | 145.53 | 183.00 |
| 35. Santoshpur | 69.74 | 18.83 | 46.95 | 172.34 |
| 36. Rajapur | 55.87 | 9.22 | 46.95 | 95.71 |
| 37. Bansdronei | 79.57 | 138.36 | 118.21 | 28.58 |
| 38. Bangaon | 23.02 | -18.10 | -73.88 | -91.32 |
| 39. Jaynagar Mazilpur | 7.34 | -11.96 | 3.15 | -12.21 |
| 40. Gobardanga | 49.78 | 20.56 | 14.09 | -21.98 |
| 41. Baduria | 17.28 | -19.14 | -74.27 | -82.03 |
| 42. Basirhat | 18.30 | -2.18 | 149.50 | 142.65 |

Appendix I (Continued)

| Town | Percentage change in urban popula- tion during 1961-1971 | Percentage change in industrial employment during 1961- 1971 | Percentage change in employment in tertiary sector during 1961- 1971 | Percentage change in employment in service sector during 1961- 1971 |
|--------------------------|--|---|--|---|
| | Y | X ₂ | X ₃ | X ₄ |
| (1) | (2) | (3) | (4) | (5) |
| 43. Taki | 19.20 | -14.17 | -19.59 | -60.22 |
| 44. Asoknagar Kalyangarh | 9.58 | 37.59 | 307.42 | 200.25 |
| 45. Dum Dum Aerodrome | -10.14 | 11.96 | -20.68 | -52.58 |
| 46. Diamond Harbour | 48.34 | 5.41 | 26.24 | 28.01 |
| 47. Rajpur | 38.61 | 9.22 | 91.42 | 34.41 |
| 48. Baruipur | 50.65 | 51.77 | -8.47 | 2.73 |
| Howrah | | | | |
| 49. Banupur | 64.50 | 132.61 | 55.51 | -71.65 |
| 50. Bauria | 22.86 | 61.58 | 22.53 | -52.50 |
| 51. Chengil | 33.80 | 13.37 | -32.33 | -54.20 |
| 52. Domjur | 27.52 | 21.34 | 44.87 | -7.02 |
| 53. Amta | 20.91 | 57.72 | 2.71 | -52.15 |
| 54. Kolara | 29.57 | 23.46 | 8.19 | -52.91 |

Appendix I (Continued)

| Town | Percentage change in urban popula- tion during 1961-1971 | Percentage change in industrial employment during 1961- 1971 | Percentage change in employment in tertiary sector during 1961- 1971 | Percentage change in employment in service sector during 1961- 1971 |
|-----------------------|--|---|--|---|
| | Y | X ₂ | X ₃ | X ₄ |
| (1) | (2) | (3) | (4) | (5) |
| 55. Nibra | 49.47 | 29.11 | 23.01 | 11.42 |
| 56. Manickpur | 18.57 | 24.31 | -17.56 | -61.76 |
| 57. Mahiari | 9.69 | 11.72 | -33.57 | -58.86 |
| 58. Howrah | 44.14 | 28.25 | 35.43 | -26.88 |
| 59. Bally | 33.16 | -79.53 | -64.85 | -74.46 |
| 60. Uluberia | 13.21 | -38.79 | 127.73 | -41.08 |
| Hooghly | | | | |
| 61. Hooghly-Chinsurah | 26.64 | 19.64 | 17.48 | 24.03 |
| 62. Serampore | 11.47 | -5.11 | -7.53 | 3.41 |
| 63. Chandannagar | 12.12 | 30.97 | -17.10 | 13.89 |
| 64. Uttarpara Kotrung | 29.53 | 306.69 | 121.02 | 184.06 |
| 65. Rishra | 64.75 | 45.80 | 22.06 | 32.87 |
| 66. Bansberia | 35.82 | 8.11 | -2.35 | 32.60 |

Appendix I (Continued)

| Town | Percentage change in urban popula- tion during 1961-1971 | Percentage change in industrial employment during 1961- 1971 | Percentage change in employment in tertiary sector during 1961- 1971 | Percentage change in employment in service sector during 1961- 1971 |
|---------------------|--|---|--|---|
| (1) | Y | X ₂ | X ₄ | X ₃ |
| (1) | (2) | (3) | (4) | (5) |
| 67. Champdany | 39.09 | 36.60 | 9.16 | 21.81 |
| 68. Baidyabati | 22.16 | -17.56 | 1.78 | 72.30 |
| 69. Bhadreswar | 28.45 | 29.86 | 0.32 | 14.58 |
| 70. Konnagar | 16.92 | -36.97 | 4.63 | 19.63 |
| 71. Arambag | 33.64 | 14.88 | 36.22 | 22.33 |
| 72. Pandua | 51.83 | -32.27 | 1.24 | -4.00 |
| 73. Tarakeswar | 31.79 | 9.23 | -1.52 | 29.38 |
| 74. Nabagram Colony | 29.02 | -24.42 | 14.43 | 66.97 |
| 75. Singur | 38.43 | -28.44 | 11.63 | 118.76 |

Source : Census of India, 1961 and 1971, (West Bengal) District Census Handbooks, for Twenty-four Parganas, Howrah and Hooghly.

Appendix II

Matrix for Region II (Bankura, Birbhum, Midnapore and Purulia)

| Town | Percentage change in urban popula- tion during 1961-1971 Y | Percentage change in industrial employment during 1961-1971 X ₂ | Percentage change in employment in tertiary sector during 1961-1971 X ₃ | Percentage change in employment in service sector during 1961-1971 X ₄ |
|--------------|--|--|--|---|
| (1) | (2) | (3) | (4) | (5) |
| | Bankura | | | |
| 1. Bankura | 25.93 | 15.21 | 1.74 | 34.53 |
| 2. Bishnupur | 23.18 | -11.43 | 44.35 | -13.54 |
| 3. Sonamukhi | 26.26 | 5.48 | -12.12 | 46.66 |
| 4. Khatia | 26.07 | -14.47 | 0.48 | 1.53 |
| 5. Patrasaer | 6.01 | -8.45 | 37.73 | -63.34 |
| | Birbhum | | | |
| 6. Suri | 26.89 | 17.18 | 22.46 | -7.23 |
| 7. Bolpur | 26.78 | 0.08 | -14.71 | -20.42 |
| 8. Dubrajpur | 13.50 | 32.65 | 33.82 | -55.97 |
| 9. Rampurhat | 19.46 | 28.73 | 9.46 | -25.36 |
| 10. Sainthia | 31.53 | -12.70 | 34.97 | -6.09 |

Appendix II (Continued)

| Town | Percentage change in urban popula- tion during 1961-1971 Y | Percentage change in industrial employment during 1961-1971 X ₂ | Percentage change in employment in tertiary sector during 1961-1971 X ₃ | Percentage change in employment in service sector during 1961-1971 X ₄ |
|------------------|--|--|--|---|
| (1) | (2) | (3) | (4) | (5) |
| Midnapore | | | | |
| 11. Midnapore | 19.81 | 0.76 | 15.10 | -3.35 |
| 12. Tamluk | 24.97 | -17.22 | 20.53 | -3.69 |
| 13. Ghatal | 30.89 | 8.29 | -85.10 | -80.96 |
| 14. Jhargram | 37.75 | 72.29 | 53.29 | -14.19 |
| 15. Chandrokhona | 32.88 | 10.79 | 4.98 | -32.97 |
| 16. Ramjibanpur | 35.99 | -16.30 | -3.37 | 0.00 |
| 17. Khrpai | 21.91 | -34.54 | -15.38 | -55.44 |
| 18. Kharar | 22.89 | -60.65 | -21.11 | 11.91 |
| 19. Kharagpur | 9.51 | -12.34 | -13.51 | -15.43 |
| 20. Contai | 23.81 | 9.75 | 26.14 | -44.52 |
| Purulia | | | | |
| 21. Purulia | 19.89 | 3.26 | 19.87 | -18.15 |
| 22. Jhaldia | 27.20 | 13.28 | 34.29 | -12.41 |

Appendix II (Continued)

| Town | Percentage change in urban popula- tion during 1961-1971 | Percentage change in industrial employment during 1961- 1971 | Percentage change in employment in tertiary sector during 1961- 1971 | Percentage change in employment in service sector during 1961- 1971 |
|------------------|--|---|--|---|
| (1) | γ (2) | X_2 (6) | X_3 (4) | X_4 (5) |
| 23. Raghunathpur | 20.50 | -11.37 | 41.77 | -12.13 |
| 24. Balichack | 16.46 | -31.78 | 11.20 | 1.70 |
| 25. Amlagora | 9.51 | -54.35 | -50.05 | -80.71 |
| 26. Mahisadal | 89.09 | 31.37 | 91.11 | 18.69 |

Source : Census of India 1961 and 1971, (West Bengal) District Census Handbooks for Bankura Birbhum, Midnapore, and Purulia.

Notes

1. K. V. Sundaram, 'A Theoretical Framework for the Study of Urban Growth Dynamics', *Nagarlok*, Volume 8, 1975, p. 16.
2. *Nagarlok*, Urban Affairs Quarterly, Volume VIII, 1975, p. 16. Report on a Research Project on 'The Role of Cities in Attaining A Desirable Population Distribution in The Context of Rapid Urbanization', by the United Nations Centre of Regional Development, Nagoya (Japan).
3. We are considering only the years 1961 and 1971, since the data on occupational distribution for the year 1981 were not available at the time of completing this paper.
4. We are considering only the male workers. The data on female workers are not always satisfactory.

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DETERMINENTS OF RURAL-URBAN MIGRATION IN WEST BENGAL

Punyabrata Sarkar

1 Introduction

Only two decades ago rural urban migration was regarded as a necessary element of rapid economic development. Popular theories and economic history depicted development as the process of moving labour from agriculture to industry with industrialization as the driving force of economic growth. Moreover, this labour transfer from agriculture to industry was, and still is, widely equated with movement from rural to urban areas. Now, the disappointing growth rate of agriculture, combined with high urban unemployment rates, has led to a questioning of this strategy.

Again, urbanization in India, as in many other Third World countries, is not coterminous with industrialization, as was the case in the early phase of industrialization. The rate of growth of population in the urban sector now far exceeds the rate at which the industries and job opportunities are expanding. Leaving aside the 1950s when several major steel plants, oil refineries and engineering industries were set up and an ambitious programme of industrialization was launched, during most of the past two decades very little progress has been achieved in terms of industrial development. In particular, in the middle of the 1960s a period of industrial recession began, from which the economy of the country has not yet recovered. The output of a large number of major industries, including cotton textiles, suffered a decline over this period, and a vast majority of industrial units are presently operating 20-40% below their capacity—including the steel plants, collieries, textile mills and power plants. A major reason for the stagnation in industrial development could be found in the lack of effective demand for the industrial products, given the poverty and low purchasing power of the population, particularly the four-fifths who are condemned to live in the villages¹.

The rate of urbanization is not so spectacular, but the tendency towards concentration of urban population in one key city is visible in India². A major consequence of this concentration is the extremely uneven process of development in West Bengal. In 1971,

out of 15 districts (excluding Calcutta), in nine the percentage of the urban population was less than 10%—of these four were located in the north and five in the western part. Apart from the five developed districts adjoining Calcutta, Darjeeling was the only other district with an urban population exceeding 10%³. Therefore, a common experience is that the urban areas are growing faster than the economic opportunities in those, which have led to widespread unemployment and the growth in the elastic informal sector's ad-hoc activities.

This paper aims at studying the pattern of internal rural-urban migration in the state of West Bengal. There have been many theories on migration explaining migratory behaviour in different ways and testing their corresponding hypotheses. No attempt has yet been made to explain migration in a comprehensive manner, therefore all the existing theories are in a broad sense partial or incomplete. In recent years, a number of papers, have appeared in the fields of economic development and international trade, have in common a seminal idea introduced by Harris and Todaro⁴ to rural-urban migration and urban unemployment. An institutionally given wage rate and wage differential between the rural and the urban sector form the basis of the Harris-Todaro (H-T) framework. Migration is governed by expected wage equalization and urban unemployment is determined endogenously from the model. A number of empirical studies have attempted to verify the main hypothesis of this model, but their findings have been mixed and conflicting. Among the economists who do not agree with the Harris-Todaro hypothesis, Connell-Dasgupta-Laishley-Lipton, grouped the major explanatory variables into 'village-based' and urban related factors. The former included measures of landlessness, concentration of land, land scarcity, land productivity, and crude literacy, and provided an overall explanation of about two-thirds of total variation, while the latter included measures of commercialization, cashcropping, proximity to urban areas and literacy, and gave a slightly better overall explanation as also more significant results for individual coefficients.

This paper intends to probe into the causes and characteristics of the problem of migration with special reference to the state of West Bengal. Migration data for this study are taken from the Census of India 1971.

The plan of the study is as follows. In Section II we present a modification of the basic job-probability model of Harris-Todaro,

keeping the original assumptions intact. At the same time different aspects and possibilities that could significantly influence migration are considered in our proposed model. Section III shows the districtwise breakdown of data for different variables considered in our model and finally, migration function has been fitted to see their significance on rural urban migration (Section IV).

II Models

The Harris-Todaro model can be stated as follows. Let W_r and W_u represent nominal agricultural and urban wage rates, respectively, E_u the number of urban jobs and L_u the urban labour force. Expected urban-rural income differential can then be written as :

$$n_y = W_u \cdot \frac{E_u}{L_u} - W_r.$$

According to this model, migration is a function of this expected urban rural income differential. According to Sabot, the simple two-sector characterization of the economy is inadequate, since the choice of a migrant to urban areas is not merely between employment in the industrial sector and unemployment; in fact a large 'informal sector' with flexible wages absorbs a significant proportion of such migrants (Todaro : 1969). The relationship between such 'flexible wage' informal sectors and the 'rigid-wage' modern urban sector needs to be investigated much more closely than has been done to date.

One limitation we face in our study regarding the Harris-Todaro expected urban-rural income difference equation, is that its application is confined only to the case where the migrating of rural populations has a base or a certain source of income at origin. This equation might be true in the case of land-owning classes and such like, but its applicability is reduced in cases where the migrants have no fixed income rural-base e.g., the case of the landless labourers. Here too, one should allow for the fact that employment is not regular or certain, and thus the 'expected rural income' should take account of the probability of getting employed. The modified expected urban-rural income differential thus becomes :

$$n_y = W_u \cdot \frac{E_u}{L_u} - W_r \cdot \frac{E_r}{L_r}$$

where, E_r is number of rural employed and L_r is the rural labour force.

This study analyses rural-urban-migration in terms of two func-

tional forms. The first consists of land-based factors and the second of urban-related factors.

For land-based factors, we have taken the district-based man-land ratio (or density of population) as indicating population pressure on land and the percentage of agricultural labourers out of total agricultural workers (which includes both cultivators and agricultural labourers) according to the Census categorisation of occupations. The equation for rural-urban migration in Model I is as follows :

$$\frac{M_{ru}}{P} = F_1 \left(\frac{P_r}{L_{ar}}, \frac{P_{ew}}{P_{aw}} \right)$$

where, M_{ru} = Total migration from rural to urban areas.

P = Total district population.

F_1 = Function of land based factors.

P_r = Total rural population.

L_{ar} = Total rural land area in sq. km.

P_{ew} = Total agricultural labourers.

P_{aw} = Total agricultural workers (including both cultivators and agricultural labourers).

In the second model, we consider the following urban related factors; the expected urban rural income differential and the rural literacy rate. The expected income differential indicates the attractiveness of the urban areas while the rural literacy rate is a proxy for the degree of awareness of urban opportunities. Model II for urban related factors can be stated as follows :

$$\frac{M_{ru}}{P} = F_u (n_y, L_{ir})$$

where, F_u = Function of urban related factors.

n_y = Expected urban rural income difference.

L_{ir} = Rate of rural literacy.

We assume that simple linear functional relations hold for both models. In the third model, we have considered the expected income difference for the informal sector as a variable affecting rural urban migration. The functional form for Model III is :

$$\frac{M_{ru}}{P} = f(n'y)$$

where, $n'y$ = expected rural-urban income difference where urban income is based on informal sector activities.

III Variables

1. Rural-Urban Migration

In this cross-section study based on the 1971 Census data on West Bengal, we have made use of the table D-V of the 1971 Census which was prepared with reference to the place of birth instead of the place of last residence. The present table thus furnishes valuable data on the short-term migration specially on rural urban nature. Here, we do not consider the case of migrants crossing the state and the district boundaries; our concern is restricted to intra-district rural-urban migration. Dividing the total number of such migrants in a district by the corresponding district population, we obtain the rate of flow of rural to urban migration of the respective district in West Bengal (See Table 1).

2. Expected rural urban income differential

To obtain the value of net n_1 (i.e., expected real income difference) for all the fifteen districts, we need the real wages for both urban and rural areas and the probabilities of getting urban and rural jobs. For urban wage, we take the average earnings of persons employed in factories in West Bengal for those earning less than Rs. 400 per month, in 1971. Here, only those earning less than Rs. 400 have been considered because most of the migrants fall in this category.

From the district-wise variation in money wages, we find that during the crop year 1970-71, the wage rate of agricultural labourers was the highest (Rs. 3.25) in Howrah and the lowest (Rs. 1.81) in Purulia. In the table below, data for Malda and Jalpaiguri are not available; for this reason, the weighted average wages of the adjoining districts are taken as the prevailing average money wage in these districts, Table 3 indicates the district-wise variation in money wage of agricultural labourers.

Here, we consider the probabilities of getting jobs in both urban and rural areas. These are to be found by dividing the total working force (main activities only) by the total potential labour force (15-59 age groups) of the respective districts. We find that the prospects of getting an employment in urban areas are relatively less than in the villages. On the other hand, we obtain positive value of urban-rural expected income differential for all the districts ranging between Rs. 30.10 and Rs. 46.94 in real income, which, according to our hypothesis, attracts new migrants.

Table 4, reveals procedure of getting the net urban-rural

expected income differentials for all the districts of West Bengal in 1971

3. Expected rural urban income differential for the informal sector

In India as in many other developing countries, the organized sector is to be found mainly in urban areas and covers modern manufacturing industry supported by the tertiary sector. The labour productivity and income even of the unskilled workers is relatively high here. The rest of the labour force must either be totally unemployed or be engaged in some economic activity outside the organized sector. Those who fail to secure employment in the organized sector, spill over to the unorganized one, as casual labourers, low-wage employees in small enterprises, as self-employed or as family workers. But this sector fails to provide them adequate income or stable employment. Here we will attempt to calculate rural-urban income differential by taking only the informal sector activities into account when considering urban income.

From the report of the Earner's Survey in West Bengal in 1971-72, we collect the data on wages in both urban and rural areas for some informal services. Then, by deflating these data by the corresponding consumer price indices of different expenditure groups, we obtain the real income measures corresponding to various districts of West Bengal. On the basis of the average gross monthly income of rural and urban areas, we get the real income for different districts, by deflating their corresponding consumer price indexes (Tables 5 and 6).

From Table 4, we get the probabilities of obtaining jobs. So we get the net expected income difference for informal sector by multiplying them with their corresponding real incomes in the respective urban and rural areas of all districts in West Bengal (Table 6). We see that the range of this net expected income difference varies from Rs. 24.25 to Rs. 12.60.

4. Village Characteristics

(i) Rural Density

In an economy where land provides the major source of living for the majority of the people, its availability must be relevant in determining migration (See Connell-Dasgupta-Laishley-Lipton (1977)⁵ Dasgupta (1978)⁶). Since our cross-section study is based on the 1971 Census data we are taking into account the 1961 Census man/land ratios for all districts so that the migrants who were the

decision makers during the preceeding decade, are also included in this study. Table 7 represents the rural density of population per sq. km. on the basis of the 1961 population figures.

(ii) Landlessness

In general and certainly in the context of the economies of migrating villages, the significance of land availability lies in its income generating potential. Inadequate access to income generating land in a village is expected to encourage migration. Landlessness is one of the true indicators reflecting the land distribution pattern among the total agricultural workers⁷.

The Census divides the total agricultural workers into three categories : agricultural labourers, cultivators and livestock handlers, according to their main activities. Cultivators are those having some tiny plots of lands of their own or tenants, whereas agricultural labourers are mostly landless, working against wages. Table 8 shows the percentage of (mostly landless) agricultural labourers out of total agricultural workers by districts in West Bengal.

(iii) Education

Several studies on migration point to a high degree of educational selectivity in migration⁸. The tendency to migrate increases with the acquisition of educational qualifications. However, the propensity to migrate need not necessarily increase linearly with educational status. In our study crude districtwise rural literacy rate is taken as the most important informative source regarding urban employment opportunity to the rural people. The following table shows the literacy level by districts in West Bengal on the basis of the 1971 Census. (Table 9)

IV Multiple Linear Regression Analysis

Our evidence from the Census migration tables 1971 for West Bengal suggests that the number of migrants from rural to urban areas is much higher for intra-district movement compared to inter-district movement excepting in case of Hooghly. We have Table 10 representing the rate of migration and different explanatory variables which are considered in our multiple-regression analysis. Data on these variables have been obtained from tables in Section III.

We now come to the findings of our study in the light of our hypothesis that, in general, the phenomenon of rural-urban migration is a consequence of a serious imbalances in the relationship between the rural and the urban sectors, reflected in (a) the net

expected income differential, accompanied by (b) the informative factor (the literacy rate) as well as the backwash effect of economic growth characterized by (c) the nature of village based resource distribution. We now compute here a number of multiple regression equations in order to identify the pattern of relationship between the rate of migration and the relevant socio-economic variables, based on the data provided by Table 10.

Model-I : Migration and Land-based Factors

Y = The rate of migration from rural to urban areas per thousand of district population.

The explanatory variables are as follows :

X_1 = Rural-density of population per sq. km.

X_2 = Percentage of landless agricultural workers out of total agricultural workers.

These two variables together indicate land scarcity as well as landlessness among agricultural workers.

The resulting regression equation is :

$$Y = 1.19 + 7.69 X_1 + 0.10 X_2 \quad R^2 = 0.51$$

(3.79) (0.05)

The land-based factors, taken together, give a satisfactory result at 1% level of significance. These two variables are found to be significant at 5% level. The percentages of variance in the migration rates explained by these two variables (i.e., r^2) range between 25% and 26%. The variables X_1 and X_2 together explain 51% of the total variation in Y .

Model-II : Migration and the 'Urban related' factors

Y = The rate of rural-urban migration per thousand district population.

The urban related factors are as follows :

X_3 = Urban-rural net expected income difference.

X_4 = Percentage of rural literacy rate.

The resulting regression equation is :

$$Y = -5.03 + 0.05 X_3 + 0.44 X_4; \quad R^2 = 0.54$$

(0.13) (0.11)

The model as a whole is proved to be highly significant at 1% significance level. However, the expected income difference as an explanatory variable is statistically insignificant, while the other variable, literacy rate, is significant at 1% level.

Model-III : Migration and Informal Sector

We have already discussed the contents of this model of informal

sector and we fit here, a cross-section simple regression model of migration, by districts in West Bengal by relating it to the expected income differential in case of the informal sector (X_5). The resulting equation is :

$$Y = 2.98 + 0.27 X_5; \quad R^2 = 0.05 \\ (0.30)$$

The variable X_5 is insignificant and the explanatory power of this variable is also very low ($R^2 = 0.05$)

Model-IV : Migration and the relevant explanatory factors

From the above models, we find that rural-density (X_1) percentage of landless agricultural workers (X_2), and the rural literacy rate (X_4) are the significant variables of rural-urban migration. Another explanatory variable expected income difference is proved to be insignificant in both the cases of formal and informal sectors, and hence this variable has been dropped.

The resulting final regression equation is :

$$Y = -3.14 + 3.87 X_1 + 0.07 X_2 + 0.28 X_4; \quad R^2 = 0.66 \\ (3.74) \quad (0.04) \quad (0.12)$$

The model as a whole is highly significant at 1% significance level. In the model the variable X_1 is proved to be insignificant but this may be due to multicollinearity. The other land-based factor, i.e., the percentage of landless workers (X_2) is marginally significant at 5% level. The literacy rate (X_4), on the other, is significant at 5% level.

V Conclusions

Our exercises shows that the Harris-Todaro model based on rural-urban income differential does not significantly explain rural-urban migratory movements in West Bengal. This model fails also when only the informal sector urban income is taken into account. The Model-I suggests that both our explanatory variables - the man-land ratio and the percentage of landless agricultural workers are individually significant indicating their importance in the rural sectors. However, in the final model this explanatory variable, man-land ratio becomes statistically insignificant, but the other variable, 'percentage of landless agricultural workers' continues to be statistically significant. Literacy rate is confirmed as one of the major explanatory variables for migration. Literacy is treated here both as a 'push' factor (the rural areas having limited opportunities for jobs suitable for educated persons) and a 'pull' factor indicating both a better access to information on urban opportunities and also the fact of the urban areas having better job prospects for the educated¹⁰.

Table 1
Rate of Intra-District Rural Urban Migration in West Bengal (per 1000 of District population)

| Districts | Howrah | Burdwan | 24-Parganas | Midnapore | Purulia | Birbhum |
|-------------------------------|---------------|-------------|-------------|-----------|------------|------------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Rate of rural-urban migration | 13.653 | 12.647 | 11.644 | 9.291 | 8.893 | 8.809 |
| | Hooghly | Murshidabad | Nadia | Bankura | Darjeeling | Jalpaiguri |
| | (8) | (9) | (10) | (11) | (12) | (13) |
| Rate of rural-urban migration | 8.589 | 8.261 | 7.880 | 7.712 | 6.984 | 5.070 |
| | West Dinajpur | Malda | Cooch Behar | | | |
| | (14) | (15) | (16) | | | |
| Rate of rural-urban migration | 4.153 | 2.840 | 1.930 | | | |

Source : Census of India, 1971, *Migration Tables : Table D-V.*

Table 2
Per capita annual and monthly money-earnings of persons employed in factories in West Bengal (earning less than Rs. 400 per month)

| Year | Average annual money earnings (Rs.) | Average monthly money earnings (Rs.) |
|------|-------------------------------------|--------------------------------------|
| (1) | (2) | (3) |
| 1971 | 2,896.00 | 241.33 |

Source : Govt. of West Bengal, *Economic Review : 1971-72.*

Table 3

Average daily and monthly money wages of adult agriculture labourers in the districts of West Bengal in 1970-71

| Districts | Money wages of field labourers (in Rs.) | |
|---------------|---|----------------------|
| | Average daily wage | Average Monthly wage |
| (1) | (2) | (3) |
| 24-Parganas | 2.61 | 78.30 |
| Burdwan | 3.21 | 96.30 |
| Midnapore | 2.73 | 81.97 |
| Howrah | 3.25 | 97.50 |
| Hooghly | 2.93 | 87.90 |
| Murshidabad | 2.56 | 76.80 |
| Nadia | 2.81 | 84.30 |
| Birbhum | 2.50 | 75.00 |
| Purulia | 1.81 | 54.30 |
| Bankura | 2.91 | 87.37 |
| Jalpaiguri | 2.80 | 84.00 |
| West Dinajpur | 2.62 | 78.00 |
| Darjeeling | 2.85 | 85.50 |
| Malda | 2.59 | 77.70 |
| Cooch Behar | 2.75 | 82.50 |

Source : Labour Directorate, Government of West Bengal, 1971-72, and Government of West Bengal, *Economic Review* : 1971-1972.

Table 4

Urban-Rural net expected income difference (manufacturing activities only) by districts in West Bengal

| Districts | Average monthly real rural earnings of agricultural labourers (base 1960-61=100) | Average monthly real factory wages (base 1950=100) | Probabilities of finding job in urban area E_u ($P_u \cdot \frac{\quad}{L_u}$) | Probabilities of finding jobs in rural area E_r ($P_r \cdot \frac{\quad}{L_r}$) |
|-----------|--|--|---|--|
| (1) | (2) | (3) | (4) | (5) |
| Howrah | 47.33 | 127.01 | 0.49 | 0.42 |

Table 4 (Continued)

| | | | | |
|---------------|-------|--------|------|------|
| Burdwan | 46.74 | 117.15 | 0.47 | 0.49 |
| 24-Parganas | 38.00 | 127.68 | 0.44 | 0.45 |
| Midnapore | 39.79 | 123.75 | 0.42 | 0.47 |
| Purulia | 26.35 | 123.12 | 0.44 | 0.52 |
| Birbhum | 36.40 | 123.75 | 0.43 | 0.47 |
| Hooghly | 42.66 | 125.69 | 0.47 | 0.48 |
| Murshidabad | 37.28 | 134.07 | 0.43 | 0.48 |
| Nadia | 40.92 | 132.59 | 0.41 | 0.46 |
| Bankura | 42.41 | 127.01 | 0.41 | 0.50 |
| Darjeeling | 41.50 | 117.15 | 0.47 | 0.63 |
| Jalpaiguri | 40.77 | 127.68 | 0.54 | 0.54 |
| West Dinajpur | 38.15 | 133.33 | 0.42 | 0.44 |
| Malda | 37.71 | 126.35 | 0.43 | 0.49 |
| Cooch Behar | 40.04 | 133.33 | 0.45 | 0.51 |

| Districts | Expected urban income ($W_u P_u$) | Expected rural income ($W_r P_r$) | Expected rural- urban income differential (n_g) |
|---------------|--|--|---|
| | (6) | (7) | (8) |
| Howrah | 62.24 | 19.88 | 42.36 |
| Burdwan | 55.06 | 22.91 | 32.15 |
| 24-Parganas | 56.18 | 17.10 | 39.08 |
| Midnapore | 51.98 | 18.70 | 33.28 |
| Purulia | 54.17 | 13.71 | 40.46 |
| Birbhum | 53.22 | 17.11 | 36.11 |
| Hooghly | 59.08 | 20.48 | 38.60 |
| Murshidabad | 57.65 | 17.89 | 39.76 |
| Nadia | 54.36 | 18.83 | 35.53 |
| Bankura | 53.35 | 21.21 | 32.14 |
| Darjeeling | 56.24 | 26.14 | 30.10 |
| Jalpaiguri | 68.95 | 22.01 | 46.94 |
| West Dinajpur | 55.99 | 16.79 | 39.20 |
| Malda | 54.33 | 18.48 | 35.85 |
| Cooch Behar | 54.99 | 20.42 | 39.57 |

Sources : For Index Number : Labour Bureau, Government of India and Government of West Bengal, Bureau of Applied Economics and Statistics, Calcutta, 1971-1972.

Table 5**Informal sector wage structure in 1971-72**

| Occupation | Monthly Urban Income (in Rs.) | Monthly Rural Income (in Rs.) |
|---|-------------------------------------|-------------------------------------|
| (1) | (2) | (3) |
| 1. Domestic Services | 69.25 | 45.08 |
| 2. Other Personal services | 123.58 | 70.66 |
| 3. Activities not adequately described | 338.00 | 69.58 |
| 4. Transport by animals like bullock cart, horse, elephant, camel etc | 133.16 | 113.75 |
| 5. Transport by men such as carrying of luggage, hand cart, rickshaw pulling etc. | 151.25 | 90.25 |
| 6. Average gross monthly income | 163.05 | 77.86 |

Sources : Bureau of Applied Economics and Statistics, Govt. of West Bengal, *Earners' Survey in West Bengal, 1972-73*, Calcutta, 1975.

Table 6**Districtwise urban-rural real incomes and net urban-rural expected income difference in informal sector**

| Districts | Real Urban income (W_u) | Real Rural income (W_r) | Net U-R Expected income difference (n_y) |
|-----------|--------------------------------|--------------------------------|--|
| (1) | (2) | (3) | (4) |
| Howrah | 83.19 | 39.32 | 24.25 |
| Burdwan | 75.49 | 33.70 | 18.97 |

Table 6 (Continued)

| | | | |
|---------------|-------|-------|-------|
| 24-Parganas | 84.48 | 39.32 | 19.48 |
| Midnapore | 80.32 | 37.07 | 16.31 |
| Purulia | 81.12 | 37.61 | 16.13 |
| Birbhum | 76.91 | 34.60 | 16.81 |
| Hooghly | 82.71 | 38.54 | 20.41 |
| Murshidabad | 87.66 | 40.13 | 18.43 |
| Nadia | 86.73 | 40.55 | 16.90 |
| Bankura | 81.12 | 36.90 | 15.62 |
| Darjeeling | 75.14 | 36.05 | 12.60 |
| Jalpaiguri | 83.61 | 40.34 | 23.31 |
| West Dinajpur | 86.27 | 40.13 | 18.57 |
| Malda | 84.05 | 40.34 | 16.38 |
| Cooch Behar | 88.61 | 41.19 | 18.87 |

Table 7

**Districtwise rural man/land ratio (per sq. km.) in
1961**

| Districts | Howrah | Burdwan | 24-Parganas | Midnapore | Purulia |
|-----------------------------------|------------|------------|---------------|-----------|-------------|
| (1) | (2) | (3) | (4) | (5) | (6) |
| Density of population per sq. km. | 933 | 377 | 432 | 298 | 204 |
| Districts | Birbhum | Hooghly | Murshidabad | Nadia | Bankura |
| (1) | (7) | (8) | (9) | (10) | (11) |
| Density of population per sq. km. | 298 | 546 | 398 | 368 | 227 |
| Districts | Darjeeling | Jalpaiguri | West Dinajpur | Malda | Cooch Behar |
| (1) | (12) | (13) | (14) | (15) | (16) |
| Density of population per sq. km. | 158 | 200 | 231 | 316 | 279 |

Source : Census of India, District Census Hand Books, 1961 and 1971.

Table 8
Districtwise percentage of agricultural labourers out of total agricultural workers in 1971

| Districts | Howrah | Burdwan | 24-Parganas | Midnapore | Purulia |
|--------------------------------|------------|------------|---------------|-----------|-------------|
| (1) | (2) | (3) | (4) | (5) | (6) |
| Percentage of landless workers | 38.71 | 51.07 | 56.56 | 50.08 | 40.97 |
| Districts | Birbhum | Hooghly | Murshidabad | Nadia | Bankura |
| (1) | (7) | (8) | (9) | (10) | (11) |
| Percentage of landless workers | 51.18 | 54.05 | 44.06 | 41.74 | 44.10 |
| Districts | Darjeeling | Jalpaiguri | West Dinajpur | Malda | Cooch Behar |
| (1) | (12) | (13) | (14) | (15) | (16) |
| Percentage of landless workers | 13.07 | 12.78 | 31.59 | 41.22 | 18.29 |

Source : Census of India., Primary Census Abstract, 1971, General population Tables series 22, West Bengal Part-II-A, Table-A-V; and General economic tables series 22, West Bengal, Part II-B (ii) P-705, Table B-VII.

Table 9
Percentage of rural literacy rate by districts in West Bengal, 1971

| Districts | Howrah | Burdwan | 24-Parganas | Midnapore | Purulia |
|------------------------------------|---------|---------|-------------|-----------|---------|
| (1) | (2) | (3) | (4) | (5) | (6) |
| Percentage of rural literacy rate. | 32.24 | 29.07 | 28.73 | 31.30 | 19.22 |
| Districts | Birbhum | Hooghly | Murshidabad | Nadia | Bankura |
| (1) | (7) | (8) | (9) | (10) | (11) |
| Percentage of rural literacy rate. | 25.01 | 33.29 | 17.29 | 25.08 | 24.75 |

Table 9 (Continued)

| Districts | Darjeeling | Jalpaiguri | West Dinajpur | Malda | Cooch Behar |
|------------------------------------|------------|------------|---------------|-------|-------------|
| (1) | (12) | (13) | (14) | (15) | (16) |
| Percentage of rural literacy rate. | 26.01 | 20.62 | 18.66 | 15.81 | 19.23 |

Source : Census of India, 1971, District Census Hand Books.

Table 10

Districtwise data on variables considered in the regression analysis

| Districts | Y ₁ (rate of rural-urban migration) | X ₁ (rural density in thousand) | X ₂ (Percentage of landless workers) | X ₃ (expected rural urban income difference) | X ₄ (Percentage of rural literacy) |
|---------------|--|--|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) |
| Howrah | 13.653 | 0.933 | 38.71 | 42.36 | 32.24 |
| Burdwan | 12.647 | 0.377 | 51.07 | 32.15 | 29.07 |
| 24-Parganas | 11.644 | 0.432 | 56.56 | 39.08 | 28.73 |
| Midnapore | 9.231 | 0.298 | 50.08 | 33.28 | 31.30 |
| Purulia | 8.893 | 0.204 | 40.97 | 40.46 | 19.22 |
| Birbhum | 8.809 | 0.298 | 51.18 | 36.11 | 25.01 |
| Hooghly | 8.589 | 0.546 | 54.05 | 38.60 | 33.29 |
| Murshidabad | 8.261 | 0.398 | 44.06 | 39.76 | 17.29 |
| Nadia | 7.880 | 0.368 | 41.74 | 35.53 | 25.08 |
| Bankura | 7.712 | 0.227 | 44.10 | 32.14 | 24.75 |
| Darjeeling | 6.984 | 0.158 | 13.07 | 30.10 | 26.01 |
| Jalpaiguri | 5.070 | 0.200 | 12.76 | 46.94 | 20.62 |
| West Dinajpur | 4.153 | 0.231 | 31.59 | 39.20 | 18.66 |
| Malda | 2.840 | 0.316 | 41.22 | 35.85 | 15.81 |
| Cooch Behar | 1.930 | 0.279 | 18.29 | 39.57 | 19.23 |

Source : See Tables 1 to 9.

Notes

1. Biplab Dasgupta, 'Migration and Development : Major Features of Migratory Movements in India', p. 23 selected studies on the dynamics, patterns and consequences of migration, III. No. 52, Unesco.
2. Biplab Dasgupta, 'Labour Migration and the rural economy' *World Follow-up Programme*, F.A.O., p. 8.
3. Biplab Dasgupta, 'Urbanization and Migration in West Bengal'
4. J. R. Harris, and M. Todaro, 'Migration, Unemployment and Development : A Two Sector Analysis, *American Economic Review*, March 1970.
5. J. Connell, B. Dasgupta, R. Laishley, M. Lipton, 'Migration from Rural Areas : The Evidence from Village Studies, 1977'.
6. Biplab Dasgupta, Migration and Rural Employment F.A.O., Rome, 1978, p. II.
7. See Connell et-al, op. cit.
8. Ibid.
9. Ibid.
10. Biplab Dasgupta, and R. Laishley, 'Migration from Villages', *Economic and Political Weekly*, 18th October, 1975

REFORMING MUNICIPAL WEST BENGAL: SOME ADMINISTRATIVE ISSUES

Abhijit Datta

West Bengal is in the midst of major reforms in municipal administration with the passage of the substantial amendments to the Bengal Municipal Act, 1932, enacted in 1981, a new Calcutta Municipal Corporation Bill, 1980, and the setting up of a new corporation in Howrah through the Howrah Municipal Corporation Bill, 1980. The two municipal corporation bills usher in a new era of municipal government for the twin cities of Calcutta and Howrah. Earlier, two attempts were made to review the various aspects of municipal administration - one by the Bengal Administration Enquiry Committee (1945) headed by Sir Archibald Rowlands, and the other by the Corporation of Calcutta Investigation Commission (1949) headed by Justice C. C. Biswas. While the Biswas Commission was asked to review the working of the Calcutta Municipal Act, 1923, the terms of reference of the Rowlands Committee covered *inter alia* the entire gamut of the local self-government institutions which could be utilized 'as an efficient adjunct to the (provincial) administration.' Most of the problems of municipal administration identified by the Rowlands Committee merit re-examination in the present context; additionally, one could expand the list by including a few new problem areas in the agenda of reform. The unresolved areas of concern of the Rowlands Committee were : (i) criteria for municipalization, (ii) municipal reorganization in Greater Calcutta, (iii) municipal staffing and management, and (iv) state machinery for municipal supervision.¹ To this, three more areas of outstanding concern could be examined, viz., : (v) types of municipal authorities, (vi) the municipal executive, and (vii) municipal functional domain. In the present paper we would examine the various issues relating to these seven areas of concern in municipal administration in West Bengal, although in a rearranged sequence.

Criteria for municipalization

In West Bengal municipalization of a 'rural' tract used to be consi-

dered on the fulfilment of the three census tests of urbanization relating to the population size, density and the extent of non-agricultural adult male population. The recent amendment (1981) to the Bengal Municipal Act has raised the population size from 5,000 to 10,000 and the population density from 1,000 to 2,000 per square mile (2.59 square kilometres), while retaining the census criteria of non-agricultural occupation, but adding an additional criterion of adequacy of internal municipal revenue for the discharge of its functions. It is not clear whether the existing municipalities not fulfilling the above criteria could be denotified or amalgamated with contiguous municipalities against the views of the concerned municipalities, except through an open review process (e.g., a boundary commission). The Rowlands Committee recommended that all municipalities having less than 20,000 population should be either denotified or amalgamated with contiguous municipalities.² The Rural-Urban Relationship Committee also thought³ that a minimum population of 20,000 would be needed to provide the basic urban services.

The introduction of an income test for municipalization in West Bengal would be meaningless without a specific minimum income limit, as in Tamilnadu where Rs. 3,00,000 is the currently prescribed minimum required municipal income. At the other end of the municipal scene, the constitution of a municipal corporation might follow a population test of 5,00,000 and a minimum annual income of Rs. 1,00,00,000, as suggested by the Rural-Urban Relationship Committee.⁴ In both cases, however, a definite income limit would be meaningful if these are periodically revised and applied to both the existing, as well as the future, municipal authorities.

Types of municipal authorities

West Bengal has four types of municipal authorities : (a) notified area authorities, (b) town committees⁵, (c) municipalities, and (d) corporations. The town committees are wholly nominated bodies with the local **Subdivisional** Officer as the Chairman. These are shortly to be fully municipalized, so that in effect there would be three types of municipal authorities : on the one hand, there are the notified area authorities which are nominated municipal institutions for rapidly urbanizing rural areas waiting to be fully municipalized; while, on the other hand, there are the normal elective urban local authorities, like the municipalities and the corporations.

The notified area authorities suffer from the odium of nominated institutions with tax powers, which could be justified only for a limited period; the town committees, on the other hand, could be partly elected where necessary, as in U.P., and made to serve the requirements of both the small towns and urbanizing rural areas. With a strict income test for municipalization, the town areas could act as transitional municipal institutions. The other option of creating town panchayets of the Gujarat variety might stand at a disadvantage within the rural dominance of the *panchayati raj* system. Continuance of the town committees with provision for partly or fully elective members would also bring the benefits of municipalization for the smaller urban centres having limited range and reduced rates of taxation and fewer functional responsibilities. The nature of state control over these committees would have to be more intimate—through the district administration while the proportion of grants also would be more comparable to the municipalities (say, about 50 %). If this approach is accepted, then a separate legislation governing these institutions seems justified.

At the other end of the scale, the distinctiveness of the municipal corporations, arising from a commissioner-oriented executive, has disappeared with the coming into operation of the new legislations for Calcutta and Howrah. It may perhaps be appropriate at this stage to think of a state-wide legislation covering all municipal corporations outside Calcutta. This would include Howrah and Chandannagore to start with, but one could think of constituting corporations in the other growth centres of West Bengal as well, like, Asansol, Siliguri, Kharagpur and, later, Haldia.

In effect, therefore, there would be three sets of municipal institutions—each with its distinct set of tax powers, functional domain, staffing pattern and the degree of state control.

Municipal reorganization in greater Calcutta

The problems of the riparian municipalities in greater Calcutta on both sides of the Hooghly attracted the attention of the Rowlands Committee which recommended that :

....the Municipalities in the industrial area be amalgamated into groups which will be sufficiently influential and resourceful to ensure a high and uniform standard of municipal services on both banks of the Hooghly. We believe that such amalgamation would result in increased efficiency, and in economy.⁶

At the same time, the Committee suggested incorporation of Garden Reach, South Suburban and Tollygunj municipalities

within the Calcutta Corporation or, in the alternative, amalgamation of the three municipalities. Tollygunj was annexed to Calcutta in 1951, although it is not yet fully integrated with the city's civic services. Garden Reach and South Suburban were merged with Calcutta in 1985; earlier the suburban municipalities feared increases in taxation and the city corporation worried about the investments needed to level-up suburban civic services in the event of merger.

The question of extending Calcutta's area and the problems of riparian municipalities in the Calcutta metropolis are really two sides of the same coin and cannot be solved in isolation. Over the years various attempts have been made through annexation, amalgamation, joint services and special-purpose authorities; but no significant improvement is in sight. What is generally not realized is that an increase in the size of the municipal authority does not by itself ensure viability; on the revenue side, it is really the fiscal base that is the key; on the expenditure side, most locally-based services being labour-intensive, are insensitive to scale economy. Generally, a smaller number of large local authorities are favoured from the point of view of control; but, it is extremely difficult to prove that this ensures efficiency or economy as well.

In the Calcutta metropolitan area, apart from the municipal authorities, there are a large number of peri-urban areas, in addition to the rural areas, which constitute about half of the total metropolitan area and cover a tenth of its population. The future local government status of all these areas would have to be considered together with the question of municipal reorganization.

Allied to the question of local government *per se* in the Calcutta metropolis, the future of the *ad hoc* statutory development and functional authorities are linked with the delivery of civic services in the metropolitan area. Many of the state functions having local bearing (traffic police, fire service, primary education, local health centres, town planning etc.) may need to be relocated or realigned in the event of a governmental reorganization in the Calcutta metropolis. Multiplication of municipal corporations with an expanded core city is too simplistic a solution for the governmental problems of the metropolis and a two-tier system approach to local government seems to be the only solution not tried so far in Calcutta⁷.

Municipal functional domain

Unlike other states, in West Bengal the basic municipal legislation (Bengal Municipal Act, 1932) does not distinguish the various

municipal functions into obligatory and discretionary categories, although the Act mentions a few priority items of expenditure on account of loans, trusts, establishment and audit. The Act specifies the various activities on which municipal fund may be spent and this includes a very wide range of functions as shown in Table 1.

The municipalities are supposed to work within the delegated functions assigned to them, although the nature of such delegation is broad enough for both the municipalities and the state government to function together. This arrangement suffers from the disadvantage of blurring the responsibilities of the two levels of government. Also, the limitations of finance and lack of qualified personnel stand in the way of the municipalities entering into competition with the state government.⁸

It is perfectly legal for a municipality in West Bengal to maintain both primary and secondary schools, hospitals, fire services; undertake milk supply, markets, cinemas, hotels; arrange for relief in time of scarcity; undertake social housing; excavate private tanks for water supply, and even to incur 'expenses of indigent inhabitants of the municipality for journeys to and from any hospital in any part of India for the treatment of special diseases and of their subsistence and proper clothing thereat....'.

The legislation also contains a residuary functional clause for 'all acts and things which are necessary for carrying out the purposes of this Act or which are likely to promote the safety, health, sanitation, education, culture, welfare or convenience of the inhabitants of the municipality', which could virtually include the entire range of state-list functions enumerated in the Constitution.

The question that arises is whether this type of wide functional jurisdiction is appropriate for the municipal authorities, with limited funds at their disposal and whether a modest list should be substituted specifying obligatory and discretionary functions. On the other hand, one may argue that municipal authorities could be expressly given concurrent functional jurisdiction with the state (barring the regulatory state functions like police, etc.) and allowed to operate where the state government does not appropriate a function through specific legislation. The debate here is between the English concept of *ultra vires* and the German concept of general competence with regard to municipal powers. The *ultra vires* concept to be operational needs to be broadly defined so that a liberal interpretation could confer general competence benefits. In

the Indian context a legal delegation to a municipality does not preclude a state to intrude into the municipal functional domain through executive decision. Therefore, the functional separation between the state and local authorities is only notional.

Classification of municipal functions into obligatory and discretionary items also does not mean that the municipalities cannot undertake discretionary functions unless all the obligatory functions are satisfactorily performed; since 'satisfaction' is a subjective judgment and it is impossible to lay down standards of functional performance of municipal regulatory and house-keeping functions, let alone the civic functions. A strict distinction between obligatory and discretionary functional categories has only accounting significance in that the municipalities are obliged to maintain an active list of all obligatory functions. Its practical significance is notional and inoperative.

The Municipal Executive

In West Bengal, with the passage of the Calcutta and Howrah Municipal Corporation Bills (1980), which provide for mayor-in-council (cabinet) form of political executive, the major problem of municipal executive in the corporation cities is over. What remains is to reconsider the existing nature of the executive system in the municipalities. There are two aspects of this problem : (a) the position of the municipal chairman, which resembles broadly the weak-mayor system in American parlance, does not permit a clear separation of the legislative and executive roles of the council : the chairman is to discharge only executive functions. This makes him unduly dependent on the vagaries of the council with its political factionalism. Is it desirable to strengthen his position, and if so, how ? (b) The future introduction of a common cadre of state-appointed executive officers in the municipalities, under the amended (1981) provisions of the Bengal Municipal Act, 1932 (Section 66(2)) makes it necessary to demarcate the roles of such executive officers *vis-à-vis* the chairman.

The second problem is easy to settle : the position of an executive officer could be the same as the commissioner under the new Calcutta and Howrah Bills, that is to say, he would be in-charge of municipal personnel and function under the overall directions and supervision of the chairman.

The position of the chairman, however, is somewhat anomalous. He has no parallel under the English system of local government.

The colonial regime foisted the District Officer or his nominee as the *ex-officio* chairman of the municipalities with powers of execution of the council's decisions. He was, in fact, the counterpart of the corporation commissioner in the municipalities. With the passage of the Bengal Municipal Act, 1884, elected municipal chairmanship was provided for; however, his position remained the same as that enjoyed by the collector-chairman. The result of this arrangement has been the stunted growth of the English committee system and concentration of executive function in an individual. He does have minor executive and emergency powers, however. Reform of this situation could be thought of in terms of either opting for a strong mayor (presidential) system or an executive committee (cabinet) system. Direct election of the chairman has been tried in Maharashtra (1975) and in U.P. (1976) and both attempts have failed, mainly because of the varying political composition of the council challenging the independently elected mayor. Complete separation of the legislative and executive powers also have not been attempted. A strong-mayor system operates successfully only in very large American cities and it would be difficult to introduce the complicated system of checks and balances in the municipalities.

The second option of introduction of a cabinet system has been suggested earlier in the context of West Bengal municipalities :

Our suggestion for the cabinet form of municipal government would really be applicable for the bigger municipalities with, say, more than 15 members. Since the success of the cabinet system depends on political homogeneity, this would not only recognize the discipline of the party system, but would also demand a responsible opposition ready to offer alternative policies and exercise necessary vigilance.⁹

The chief executive member (president) may nominate two of the elected members to act as executive members (vice-presidents) and the three could form the executive committee. All three would have to be full-time functionaries and their term could be coterminous with that of the council. Necessary restrictions against frivolous no-confidence motions against the executive committee could be incorporated. The chairman may continue to function as a speaker.

The third option mentioned in the Indian context is the introduction of a city-manager system, as prevalent in the small and medium towns in America.¹⁰ This being a bureaucratic solution to the problem of the municipal executive will not be acceptable, since the

municipalities are the only form of local government in India which have tasted political power of decision-making and a complete reversion from a system of political executive to an appointed civil servant is likely to be a non-starter.

It is curious to note that no one in recent times has suggested the introduction of the English system of the committee-oriented municipal executive, under Indian conditions. The centralization of the municipal executive (even under a weak-mayor variety) for 140 years in India makes such a proposition unacceptable to all concerned.

Municipal staffing and management

West Bengal municipalities have long been devoid of top-level officers in charge of the day-to-day administration. One reason is the extreme poverty of municipal finance; but the main reason is that the municipal chairman with the various committee chairmen have been functioning in executive capacities, resulting in a confused state municipal administration. The state government also took little interest in devising a suitable municipal personnel structure on the mistaken belief that a separate personnel system leaves very little for the state government to do in this regard. The examples of Maharashtra and Gujarat where a separate personnel system exists along with a well-designed personnel structure, at the instance of the concerned state governments, have gone unnoticed.

In 1955, through an amendment of the Bengal Municipal Act, 1932, the state government took the power to direct a municipality to appoint all or any of the following officers and staff within a specified period : (a) an executive officer, (b) a secretary, (c) an engineer, (d) a health officer, and (e) one or more sanitary inspectors. They could not be removed or suspended by a municipality, except by passing a resolution of two-thirds majority in the council. However, the operation of this provision has been halty, especially in the absence of a cadre from which to draw the officers with required qualification and experience. Recently (1981), the Bengal Municipal Act, 1932 has been further amended to provide for two categories of managerial staff :

- (a) officers to be appointed by the government and paid from government funds for a municipality or a group of municipalities, but subject to the administrative control of the municipality; these are : (i) an executive officer, (ii) an engineer, (iii) a finance officer and (iv) a health officer; and

- (b) officers, of whom those carrying monthly salary of Rs. 1000 would need state sanction, may include : (i) a secretary, (ii) a medical officer, (iii) one or more sanitary inspectors, (iv) a superintendent of water works, (v) an assessor, (vi) an office superintendent, and (vii) an accountant.

The first category of posts have the potential of forming into state wide unified cadres of municipal officials. It is somewhat anomalous that the state government would be paying for them. Perhaps this was a political compromise; partly, of course, this is due to the financial weakness of the West Bengal municipalities to afford such an induction of highly paid municipal staff. There needs to be some relationship between expenditure on general administration as a proportion to total municipal expenditure (which could be around 25%). Also varying sizes of municipalities with varying tax bases would need different staff strength; some may have to share the services of some officers with contiguous municipalities. The whole thing needs to be gone into details, with staff strength determined on the basis of work studies carried out by the O & M cell of the state government. The important point is that henceforth all municipalities would have a full-time executive officer. His relationships with the chairman are to be delineated with a clear understanding that he functions under the overall guidance and supervision of the political executive and in case of any conflict, the executive officer will have to be withdrawn. If the position of the chairman undergoes changes in future through the creation of a cabinet system, the role of the executive officer would result in a corresponding change. Improvement of municipal management has to be in conformity with the imperative of a political executive in the municipal sphere.

It might be of interest to note that the Rowlands Committee recommended the appointment of an executive officer for each municipality, primarily to tone up tax collection. To quote :

We believe that the existence of such an officer in every municipality will greatly improve collections, and will ensure that, even when the Chairman is absent or otherwise engaged, Municipal affairs will continue to run smoothly.¹¹

However, the Committee was divided on the question, whether 'these officers should form part of a "Municipal Service", appointed and paid for by Government, and transferable when occasion arises', or whether 'the Executive Officer should be a Municipal

servant.' The majority view favoured the latter course.¹² Current thinking seems to have reversed the earlier liberal disposition expressed under an alien rule.

State machinery for municipal supervision

The idea of an inspectorate of local bodies to be attached to the state department of local self-government was first mooted by the Rowlands Committee, but nothing came of it until the Bengal Municipal Act, 1932, was amended in 1955 which provided for a director of local bodies. This has been acted upon only recently (1978) and the powers vested with the divisional commissioners for supervision of the municipalities now (1981) have been delegated to the director. The three inspectors of local bodies attached to the three divisions now function under the director. In the absence of a regional set-up (as in Andhra Pradesh, Harayana, Kerala, Punjab and Tamilnadu) or an arrangement with the district administration (as in Gujarat, Maharashtra and Rajasthan) such direct functioning from the headquarters is not conducive to speed and efficiency. Moreover, the *raison-d'être* of the municipal directorates have been the management of a centralized municipal cadre; without such a control function, the developmental role of the director has nowhere been manifest. It may be recalled that the Rural-Urban Relationship Committee suggested that the directorates should 'guide and advice local authorities in the solution of their current and future problems and advocate their cause with the relevant departments', having specialized sections on personnel, central valuation, planning and finances, and general supervision.¹³ In order to be effective, the municipal directorate would have to equip itself properly to technically assist the municipalities. Unless this is done without further loss of time, the justification for such a directorate might be questioned.

Along with the directorate of local bodies, a separate municipal engineering directorate has been created to prepare plans for water supply, drainage and sewerage disposal in the municipalities outside the Calcutta Metropolitan Area while the projects are being executed by the original functional (health) department. Either the entire charge of public health should come to the local government department, or things should stand as they are. The house-keeping role of the local government department, including its directorate of local bodies, needs to be properly designed and attended to. A few examples are : development of a proper informa-

tion system, creation of a work study cell to streamline the administrative problems faced by the municipalities, setting-up of the consulting unit to appraise municipal projects, assistance to the municipalities to prepare corporate plans, initiate reforms in budgeting and financial control practices, rendering legal advice—the list is really endless, provided there is a genuine willingness to help rather than exercise their control over municipal authorities. We can do no better than to quote from the Rowlands Committee's despair in this connection :

Little has been done to guide or to encourage Municipalities, inspections have been few and generally superficial, and there have been serious delays in dealing with files relating to municipal matters..... Unfortunately, such delays are typical; they bring Government into disrepute, and lead to confusion in municipal affairs.¹⁴

Conclusion

We have attempted to indicate the possible areas of municipal administrative reform in West Bengal, identify some of the critical issues and also indicate the possible directions of reform. It may be emphasized that all the positive suggestions made here are tentative in the absence of detailed investigation into the maladies of municipal government in the state. For this what is needed is an open exercise for a systems reform, since experience shows that local government reform of a comprehensive nature has distinct advantages over changes of its various components.¹⁵

In the area of municipal finance, such an attempt has been initiated in West Bengal with the report of the Municipal Finance Commission, having wide and comprehensive terms of reference.¹⁶ Undoubtedly, finance is the Achilles' hill of any local government system and its belated consideration could negate much of the ongoing municipal reform efforts in West Bengal, as has been demonstrated even in countries with developed system of local government, like Britain.

There is, however, one aspect of the current municipal reform efforts in West Bengal that is somewhat disconcerting. The two voluminous legislations for the corporations of Calcutta and Howrah are meant to be operative at least for a generation; without openness in such reform attempts of monumental dimensions, much of their legitimacy could be at stake. Machiavelli in *The Prince* cautions against such undue haste in initiating reform in the

following passage :

There is nothing more difficult to carry out, nor more doubtful of success, nor more dangerous to handle than to initiate a new order of things. For the reformer has enemies in all who profit by the old order, and only lukewarm defenders in all those who would profit by the new order. This lukewarmness arises partly from fear of their adversaries, who have the law in their favour; and partly from the incredulity of mankind, who do not truly believe in anything new until they have had actual experience of it.¹⁷

Much of the suspicion and hesitancy of the clients of reform could be eliminated by opting for an open system of municipal administrative reforms.

Table 1
Municipal Functional Domain in West Bengal
(barring the municipal corporations)

(a) Civic services

- Public works, street cleaning and lighting, planting and preservation of trees, open spaces and recreation, municipal markets and slaughter houses, survey of buildings and lands, social housing.
- Water supply, conservancy and drainage, repair of private tanks for water supply, maintenance of public conveniences.
- School education, teachers training and scholarships, public libraries and museums.
- Hospitals, dispensaries, maternity homes, orphanages, poor houses, rest houses, employment of health officers and staff, expenses for treatment of indigent inhabitants, maintenance of ambulance.
- Veterinary dispensaries, employment of veterinary practitioners, improvement of cattle breed, places for disposal of carcass, maintenance of dairy farms and grazing grounds, milk supply.
- Markets, slaughter houses, godowns, cold storages, cinemas, hotels.
- Fire services.
- Fairs and exhibitions.
- Relief in time of famine, scarcity or natural calamity.
- Disposal of the unclaimed dead and paupers.
- Beautification by fountains, trees, river bank development.

(b) Regulatory services

- Vaccination, prevention and spread of dangerous diseases, destruction of noxious animals and dogs, propaganda for public health and education.
- Regulation of offensive and dangerous trades and removing noxious vegetation.
- Prevention of cruelty to animals.
- Regulating the disposal of the dead.
- Municipal census.

(c) House-keeping activities

- Construction and maintenance of municipal buildings, including buildings for municipal staff.
- Payment of compensation to the public.

Table 1 (Continued)

- Payment of bonus for compensation to municipal staff, training of municipal staff, publication and purchase of journals and newspapers.
- Purchase of national flag, portraits, statues, placing of wreaths on deadbody, cost of public ceremony, civic reception or other functions.

(d) Miscellaneous

- All acts necessary for the purpose of the Act or which are likely to promote safety, health, sanitation, education, culture and welfare of the inhabitants of the town.

Source : Section 108 (i) to (xxxvi), *Bengal Municipal Act, 1932* (as amended in 1981).

Notes

1. Bengal, *Report of the Bengal Administration Enquiry Committee, 1944-45*, pp. 103-110, Alipore, 1945.
2. Op. cit., p. 109.
3. India, *Report of the Rural-Urban Relationship Committee*, Vol. I, p. 26, Delhi, 1966.
4. Ibid.
5. The town committees have close similarities to the Class III stations under the Bengal Municipal Act, 1876.
6. *Report of the Bengal Administration Enquiry Committee, 1944-45*, op. cit., p. 104.
7. Abhijit Datta, 'Institutional Alternatives for Urban Development in Calcutta', *Nagarlok*, Vol. IX, No. 2 (July-September, 1977).
8. Abhijit Datta, 'Municipal Administration in West Bengal', in A. Avasthi (ed.), *Municipal Administration in India*, p. 407, Agarwal, Agra, 1972.
9. Abhijit Datta, 'Municipal Administration in West Bengal', op. cit., 406.
10. India, *Report of the Task Force on Planning and Development of Small and Medium Towns and Cities*, Vol. I, p. 67, New Delhi, 1977.
11. *Bengal Administration Enquiry Committee, 1944-45*, op. cit., p. 106.
12. Ibid.
13. *Report of the Rural-Urban Relationship Committee*, Vol. I, op. cit., p. 120.
14. Op. cit., p. 107.
15. United Nations, *Local Government Reform : Analysis of Experience in Selected Countries*, New York, 1975, p. 77.
16. See, West Bengal, Local Government and Urban Development Department Resolution', dated December 6, 1979.
17. Quoted in : Gerald E. Caiden, *Administrative Reform*, Allen Lane, The Penguin Press, London, 1969, p. 18.

MUNICIPAL FINANCE OF WEST BENGAL: SOME ISSUES

Tapan Kumar Banerjee

I The perspective

The aggregate revenue gap¹ (RG) of the urban local bodies (ULB) of West Bengal in 1979-80 was about Rs. 20 crores. Almost all the ULBs of the state were in the red. The proportion of RG in the total revenue expenditure varied between 37% and 51%. Historically, the RGs of the ULBs were being bridged by resource transfer from the state. The dependence on such transfers has undergone phenomenal increase over the last two decades. Viewing even at a short period, aggregate transfer to ULBs, which was 37% of their total revenue income (including transfers), went upto 43% by 1979-80. The RG has been increasing notwithstanding the relatively low level of civic amenities provided by the ULBs of this state. The per capita municipal expenditure of West Bengal is one of the lowest among the 16 larger states listed in Table 1 with corresponding per capita revenue expenditure in 1976-77. In descending order of per capita municipal revenue expenditure, West Bengal ranks 14th, to be followed only by Assam and Bihar. The per capita municipal expenditure of West Bengal was only Rs. 28.12 as compared to Rs. 113.01 of Maharashtra, Rs. 72.15 of Gujarat, and Rs. 67.31 of Himachal Pradesh. Admittedly, if functional disparity and relative population density be taken into account, these figures may undergo some changes. But there would not be a significant change in the order of this situation. Moreover, West Bengal's figure of Rs. 28.12 per capita does not compare well even with the all India average of Rs. 53.14 per capita. Thus, to reach atleast the all India average the ULBs of West Bengal will together have to double their per capita revenue expenditure, which in turn will push up the RG to about Rs. 48 crores at 1976-77 price level. Corrected by inflation factor, today the aggregate RG could be well around Rs. 65 crores. The relatively low level of civic infrastructure is perhaps the culmination of the inability

of the ULBs of the State to mobilize enough resources by themselves within the limits of the financial powers delegated to them by the state government.²

Grants-in-aid are being given only for enabling them to make the two ends meet at a low operational level. Increasing dependence on state aid reduces financial autonomy, and perhaps self-reliance too. This perhaps explains, at least partially, the relatively slow rate of growth of municipal revenue of the state from their own sources. During the period 1975-76 to 1978-79, while their receipt of grants-in-aid grew at an annual average rate of 20%, their own revenue income grew by only 10%³

Given the prevailing pattern of the fiscal and financial relationship between the state and the urban local bodies, even for regulatory and house-keeping functions, the dependence on the state will continue to grow due to inflationary pressure. Beyond that, the CMD-ULBs, which account for 75% of the urban civic services, will inevitably have additional operation and maintenance load in the foreseeable future arising out of the municipal development programmes already carried out or are now being implemented by the CMDA which has not yet been reflected in their revenue expenditure. For other ULBs also, the state has been allocating development funds in increasing amounts for uniform development of civic unfrastucture in the municipal urban areas all over the state. All these programmes and actions already initiated will go on adding additional revenue commitments for the ULBs in the coming years.

An urban environmental development programme which is to be sustained by ULB needs to be compatible with its resource position. In the case of development of minimum civic needs also, the ULBs should be equipped with sufficient financial resources so that the infrastructure so created could be maintained and operated. This aspect of municipal finance, which is often neglected, is of crucial importance. For, while funds for capital outlay may be forthcoming from government's plan and non-plan allocations, as also from development agencies and financial institutions, recurring commitments arising out of capital outlay are to be met from revenue income. Every rupee of capital outlay at any point of time generates a flow of revenue expenditure for the entire length of the life of the assets emerging out of that; and also for debt servicing of the loan, if taken, for the entire term of the loan. Thus the

incremental outlay for raising the level of civic environment is a function of incremental actual or potential revenue income of a ULB. In the present situation, the prospect of incremental revenue income of the ULBs from their own sources being bleak,⁴ they may not perhaps be able to sustain additional doses of capital outlays or new services, or improvement in services unless they are enabled to mobilize more revenue resources or unless the state is prepared to adopt a policy of continual growth of revenue grants matching the marginal revenue needs of the ULBs.

This being the perspective, what follows next is a brief examination of the potentiality of the existing sources of municipal revenue income to be followed by an analysis of the fiscal relation between the state and the local bodies, and finally some issues will be raised for future discussion.

II Municipal revenue : the prospect

Property tax is the age old source and also the mainstay of municipal revenue. From Table 2 it may be seen that as high as 69 to 83% of the total internal revenue comes from this source alone. In the tax income, property tax constitutes 85 to 90%. Although the sheet anchor of municipal finance in West Bengal, property tax has long been a relatively slow growing source of revenue due to its almost stagnant base.⁵ During the period 1975-76 to 1978-79, while the state's sales tax grew at an annual average rate of 13%, proceeds from municipal property tax grew at the rate of 3% only. Various expert deliberations and committee reports have tried to identify the causes of the near stagnation in the growth of property tax, some of these are : (a) sluggish housing activity in the state, (b) the Rent Control Act *vis-a-vis* provisions about assessment of property tax in municipal acts,⁶ (c) under-valuation of properties, (d) levying of low rates, and (e) inefficiency in collection. A tangible solution to these problems is yet to be found, particularly for making valuation of properties more responsive to market conditions with regard to real estate values and their rentals. Streamlining of collection mechanism, or some marginal reforms in the valuation procedures can undoubtedly bring in some additional revenue, but its quantum can not but be insignificant as compared to the size of the municipal resource problem of the state.

Property tax being where it is, even if other taxes, which together constitute 8 to 13% of the municipal income from the ULBs' own sources, were growing at a reasonable rate, they could

not perhaps make a dent on their resource problem. In fact the prospects of growth of these minor taxes are limited by both extraneous or inherent constraints. Tax on 'profession, trade and callings' has a constitutional ceiling of Rs. 250/- per assessee per annum. Even a big factory employing 3000 workers or a doctor earning more than a lakh rupees a year can not be taxed more than Rs. 250/- per annum.

Another tax which the ULBs can levy is on 'animals and vehicles'. Under the provision of the Act only non-motorized vehicles can be brought under the perview of this tax. Thus, besides animals, this tax can be levied on rickshaws, rickshaw vans, animal driven carts, handcarts and similar other vehicles. This tax, apart from serving regulatory functions with regard to animals and vehicles, contributes little to municipal fund. This is all about the revenue potentiality of the ULBs from taxes.⁷

The non-tax revenue (excluding grants) of the ULBs is constituted mainly of fees and fines related to regulatory functions, as well as rent from properties, sale proceeds of municipal wastes and other disposable materials, and charges for special services rendered to the residents. These sources of revenue, except perhaps fines, can be exploited for substantial addition to municipal revenue provided the ULBs are enterprising enough to run some revenue earning services, commercially. However, its effect on the resource problem cannot be marginal.

III Fiscal relation

Risking repetition it may be said that, with their existing fiscal and financial powers, there is hardly any prospect of the ULBs of the state to augment enough resources, all by themselves, for sustaining civic amenities even to the level of meeting their minimum needs. Nevertheless, with the process of urbanization and resultant continuing need for urban development, added to the backlog of development activities, there would be rising investment requirements for urban infrastructure giving rise to increasing operational and maintenance commitments, which the ULBs will ultimately be expected to bear irrespective of who implements the developmental schemes. It then follows that the present fiscal and financial relation between the state and the ULBs is not compatible with the developmental future of the municipal urban areas. Thus, inevitability of restructuring of this relation needs to be recognized. Options in this regard are, however, not too many.

The ULBs could either be delegated⁸ with more sources of revenue which will provide them with enough revenue to meet their recurring commitments, or the state could transfer enough fund from its exchequer so that their resource gaps are bridged. The third alternative could be a combination of both.

Delegated sources of revenue or, alternatively, assignment of some earmarked state taxes may enjoy more preference than general grants-in-aid in that, in the former case the revenue to be earned by the ULBs is linked up with the normal growth of the delegated or assigned taxes, while in the latter case, the revenue is determined through budgetary process which may not increase proportionately to the state's growth of revenue. This belief arises from what can be seen in Table 3. Notwithstanding the fact that grants received by the ULBs have been increasing at a much faster rate than their own revenue, the growth of grants (including Entry Tax, and share of Motor Vehicles Tax) have been creeping at a remarkably slow pace as compared to the state revenue. Taking 1971-72 as the base year, the index of state revenue income reached 1003 by 1979-80, while the grants to ULBs could reach only 260. Admittedly, with the state's ever expanding public functions, its increase in revenue is more than offset by its rising commitment. But the revenue grants given to ULBs being a very small percentage (2 to 3%) of the state's total revenue expenditure, even if the transfer is doubled, its effect on the state budget may not be highly disturbing. On the other hand, by linking the growth of state revenue or expenditure with that of the ULBs, a parity between the growth of state revenue and municipal revenue, through budgetary process, could be brought about.

Furthermore, except the proportion of the Entry Tax, the revenue grant is all tied up to 'Specific Purposes'.⁹ That the untied portion alone is not sufficient to offset the municipal revenue deficit after taking into account the 'Specific Purpose' grants is manifest in the rampant diversion of development funds for recurring expenditure, illegal drawings from employees' provident fund, and inability to repay ways and means advances taken from the state, besides frequent postponement of essential maintenance works of municipal assets. Their financial plight is also reflected in their reluctance to 'take-over' the water supply schemes implemented by government agencies on their behalf, mainly on financial grounds.

'Grants...(are) used only to correct marginal shortcomings of local administration when it becomes unavoidable but not to achieve any definite long term design. This attitude, when coupled with the growing concern about civic services, induces, even in recent studies on this matter, an uncomfortable sense of ad-hocism.'¹⁰

On the other hand there are examples of quite a few states which have been providing much higher levels of civic services and performing more public functions than the ULBs of this state with relatively very low proportion of revenue grants in their total revenues. These are the states Maharashtra, Kerala, and Gujarat e.g., which delegated more fiscal powers to their ULBs as an alternative to revenue grants. Referring back to Table 1, it may be seen that the per capita municipal revenue expenditures of these states are many times higher than that of West Bengal.

Rationality in evolving a healthy fiscal relationship is, however, preconditioned by a clear division of public function between the state and the ULBs. Overlapping of functions or encroachment over local functions are not missing in the municipal history. Preventive and curative health care, and primary education are two examples in point. Precise functional division is more important because there does not exist any municipal list of functions like state list or central list in the constitution. The state has to share its resources with ULBs as much as it has to clearly distinguish between the functions to be carried out at local and state levels.

Once the functional responsibilities are clearly laid down, the degree of autonomy to be allowed to the ULBs can very well be determined. Declaration of autonomy may be less meaningful in the absence of financial autonomy. Grants-in-aid may bridge the resource gap, but all the same it makes the ULBs increasingly dependent on the state and less reliant on their own efforts which is reflected even on their maintenance of civic amenities. It may, therefore, be more logical first to have a clear cut division of state and local public functions, and second to delegate (alternatively, to assign) adequate and buoyant revenue bases to the ULBs, reducing the grant-in-aid to the essential minimum. In this environment, the ULBs may perhaps be able to work better with more efforts for resource mobilization and manage their affairs all by themselves

without having to depend on state aid for meeting their recurring commitments.

The state, on the other hand, may limit its role, in this context, to inspection, and audit of municipal administration and accounts besides lending the ULBs adequate technical, financial, and administrative expertise as and when needed.

While redefining the relationship of the state with the local bodies it is perhaps necessary to emphasize its role which has so far been ignored with regard to integration between development programmes in the municipal sector and the state plans, similar to the finalization of state plans and the commitments of central assistance for the same. In the absence of such an integration the capital grants or development assistance 'consists mainly of a variety of project grants to the municipal authorities, depending on the budgetary position of the state government, and the initiative displayed by the municipalities in this regard...'. The following lines may sum up this situation :

It is fair to conclude that capital grants to the municipalities are not linked with national planning, and municipal development has not moved beyond undertaking isolated projects. Without integration of municipal and state planning, it is not possible to ensure necessary development-finance to the municipal institution,... how can there be any coordinated local development of any significant magnitude.¹¹

IV Issues

The limited purpose of this essay was to focus on the main issues concerning local finance which need to be resolved for the healthy growth of the institution of urban local government of West Bengal so that it can meet at least the minimum needs of civic amenities of the municipal urban populace of the state. The issues are now listed below;

1. Clear division of public functions between the local bodies and the state including state level, metro level, and city or town level development agencies.
2. Amendment of Rent Control Act to alleviate its conflict with municipal property valuation and thus to make the base of property more responsive to market conditions with regard to values of real estate properties and their rentals.

3. Clear distinction between state and local sources of revenue.
4. Rationalization of grants-in-aid.
5. Clear definition of the role of the state *vis-a-vis* urban local bodies.
6. Integration of municipal development programmes with those contained in the state plan.

Table 1

**Per capita Municipal Expenditure in some States
in 1976-77**

| States | Per capita Municipal Expenditure (Rs.) | Rank |
|-----------------------|--|------|
| 1. Andhra Pradesh | 54.26 | 5 |
| 2. Assam | 22.06 | 15 |
| 3. Bihar | 21.81 | 16 |
| 4. Gujarat | 72.15 | 2 |
| 5. Harayana | 57.61 | 4 |
| 6. Himachal Pradesh | 67.31 | 3 |
| 7. Jammu & Kashmir | 28.90 | 12 |
| 8. Karnataka | 42.90 | 9 |
| 9. Kerala | 28.35 | 13 |
| 10. Madhya Pradesh | 47.99 | 6 |
| 11. Maharastra | 113.01 | 1 |
| 12. Orissa | 44.13 | 8 |
| 13. Punjab | 32.77 | 11 |
| 14. Rajasthan | 45.09 | 7 |
| 15. Uttar Pradesh | 36.21 | 10 |
| 16. West Bengal | 28.12 | 14 |
| All India (16 States) | 53.14 | — |

(i) India (Ministry of Home Affairs Office of the Registrar General, India, *Report of the Population Projections worked out under the guidance of the Expert Committee*, New Delhi, 1968.

(ii) Report of the Finance Commission, 1978.

Table 2

Main Components of Revenue income of Urban Local Bodies : 1978-79

| Urban Local Bodies | Percentage of revenue | | | | |
|----------------------|-----------------------|-------------|-----------|-----------------|---------------|
| | Property Tax* | Other Taxes | Total Tax | Non-tax Revenue | Total Revenue |
| All West Bengal | 73 (86) | 11 | 85 | 15 | 100 |
| CMD Local Bodies | 74 (86) | 12 | 86 | 14 | 100 |
| Calcutta | 73 (85) | 13 | 86 | 14 | 100 |
| Howrah | 83 (86) | 13 | 96 | 04 | 100 |
| Others | 74 (90) | 8 | 82 | 18 | 100 |
| Non-CMD Local Bodies | 69 (87) | 10 | 79 | 21 | 100 |

*Figures in parentheses indicate percentage of Property Tax in total tax income.

Table 3

Index of total revenue receipts of Government of West Bengal and Transfers to urban local Bodies (ULB)

| Year | Total State Revenue | State transfers to ULB | | |
|----------|---------------------|------------------------|-------------|-----------|
| | | CMD ULB* | NON-CMD ULB | Total ULB |
| 1971 -72 | 100 | 100 | 100 | 100 |
| 1972 -73 | 366 | 85 | 111 | 88 |
| 1973 -74 | 393 | 105 | 104 | 105 |
| 1974 -75 | 479 | 137 | 141 | 137 |
| 1975 -76 | 585 | 142 | 113 | 138 |
| 1976 -77 | 647 | 165 | 151 | 163 |
| 1977 -78 | 728 | 224 | 192 | 220 |
| 1978 -79 | 867 | 233 | 212 | 231 |
| 1979 -80 | 1003 | 261 | 250 | 260 |

*Including CMDA, CIT and HIT.

Source : Civil Budgets and Explanatory Memoranda of Civil Budgets of Government of West Bengal 1980-81.

Notes

1. Revenue gap (RG)—Revenue income from own sources *minus* total revenue expenditure.
2. The institution of local governments or local bodies does not have any constitutional entity. Municipalities and municipal corporations are creations of the state and are delegated with as much financial and fiscal power, and as many public functions as the state may decide to allow them under what the constitution provides under the state list.
3. Some ULBs had below 5% rate of growth of internal revenue, and some others had even lower rates of growth.
4. As otherwise the resource gaps would have been much less.
5. Since Property Tax by itself is a major topic of discussion, the related issues are left out of the present essay.
6. 'In spite of the considerable building activity and high rents there, the per capita ratable valuation of properties in the Bombay Municipal Corporation area has taken fifteen years to double. The collection of property tax there has grown at only 5% per annum in last five years.' Nirmala Banerjee, 'Formulation of a Grants Policy for Local Bodies', *Nagarlok*, Vol. XIII, No. 2, p. 13, April-June 1981.
7. Calcutta Corporation has, however, a few more minor taxes like tax on 'advertisement and hoardings', and show tax.
8. Including assignments of some earmarked taxes.
9. Other two components of revenue grants are (i) subvention to meet 80% of the addition dearness allowance, and (ii) ^{State} of Motor Vehicle Tax which, except for Calcutta Corporation, is not a regular grant, and is meant for road repair.
10. *Ibid.* p. 15
11. Abhijit Datta, 'State grant and Shared Taxes', *Nagarlok*, Vol. III, No. 4

SMALL INDUSTRIAL-URBAN CENTRES AND RURAL HINTERLAND : NATURE OF LINKAGES AND INTERDEPENDENCE BETWEEN THEM

Pranab Kumar Das Gupta

The importance of linkage and interdependence between an urban or industrial centre and its rural hinterland is beyond doubt. Redfield (1956) tried to see the 'folk' and 'urban' dimensions of a civilization in a state of continuum putting the peasant society in between the two. He also talked about the 'little tradition' and 'great tradition' to identify the linkages between the culture of the village and that of the reflective group of specialists of urban centres. Kroeber (1948) emphasized the linkage between the rural and urban dimensions when he viewed the peasants as 'part societies' with 'part cultures'. But the nature of the linkage may vary owing to various materialistic and non-materialistic attributes of the urban as well as those of the interacting rural component.

This paper attempts to show the nature of linkages and interdependence between small industrial-urban centres and the rural hinterland on the basis of some case studies in West Bengal and Bihar.

Ever since independence, the Five Year Plans of the Government of India have been directed substantially towards raising the level of industrialization, and a number of heavy and small industries have been established in different parts of the country including remote tribal belts. Growth of such industrial-urban centres in the hitherto virgin rural areas has opened up new channels of communication between the pre-industrial rural societies and the industrial-urban centres. One important aspect of such communication is in the sphere of employment of labour for the industrial-urban jobs.

Superabundance of labour force in the rural sector of India is a striking phenomenon. Even in 1880, the Famine Commission observed that the people engaged in agriculture were greatly in excess of what is really required for cultivation. Fifty years later, the

Royal Commission on Labour in India (1931) stated that over large parts of India, the number of persons on the land were much greater than the number required to cultivate it and greatly in excess of the number it could comfortably support. It was found that over 60% of the people who had migrated to the urban and industrial centres of India were from villages and they left the village mainly owing to economic distress (Weathereford, Jr. 1962 and Deshmukh 1956). The Royal Commission (1931 : 16) reported that the industrial workers were 'pushed' out of rural areas and not 'pulled' towards the city. This was corroborated by Sovani (1966 : 7). According to him, the main cause of 'over-urbanization' in this country is the pressure of population on land in the rural areas. Economic pressure or 'push' in the countryside mounts continuously and pushes out people to the cities in search of employment and livelihood. The rural-urban migration that leads to over-urbanization is mainly a consequence of this 'push' from the countryside, rather than the demand for labour by developing economic activity in the towns and cities or what is called their 'pull'.

Such permanent or seasonal migration takes place when there is no industrial or urban centre in the neighbourhood of villages which can provide some employment even temporarily. When there are such centres near the village the people try to exploit the economic opportunities in these while staying in the village. Another important feature of such rural-urban linkage is the maintenance of agriculture. The people prefer to live in their native villages so that they can also look after their agriculture. When the urban-industrial employment centres are far away from the village, in most cases they leave their family behind in the village to take care of agriculture. This is perhaps one of the reasons for the striking imbalance in male-female ratio which one observes in many urban and industrial centres of India.

Before the establishment of the Chittaranjan Locomotive Works (CLW) and the Hindustan Cables (H C) in the Burdwan district of West Bengal on the border of Santal Parganas, the economic structure of the people of the area rested primarily on agriculture. The 1951 Census data of a few adjacent villages of CLW and HC show that about 94% of the population depended on agriculture. This included cultivators of land mainly or wholly owned and their dependents, cultivators of land wholly or mainly unowned and their dependants, and cultivating labourers and their dependents. The

Santals of this area were primarily agriculturists. Most of them owned little bits of land but primarily cultivated other people's land as agricultural labourers or as sharecroppers getting one-half or one-third share of the produce. Paddy was by far the most important crop and, owing to the lack of irrigation facilities, little else was grown. During the off-season in agriculture they migrated to the neighbouring industrial and urban centres and worked in coal mines or small factories or employed themselves in various types of manual work like earth-cutting, construction and maintenance of railway lines, etc. to earn cash income. After the establishment of these two industrial-urban centres there, new avenues for subsistence were created and, consequently, the occupational table was markedly altered. A survey conducted by a local Union Board (predecessor of today's panchayets) in 1963 revealed that only 47% of the population was solely attached to agriculture. A sample survey conducted by the author among the Santals (who are numerically dominant in the area) in four villages around CLW showed that only 42% of the working population had agriculture as the sole occupation (Table 1). This shift of a section of the population from the primary occupation of agriculture to industrial-urban jobs or a mixed occupation of agriculture and industrial-urban jobs has also been noticed in other industrial-urban areas such as the mining areas of Singhbhum District of Bihar (Table 2) and in the villages surrounding the Chaibasa Cement Works (CCW) located in the same district (Table 3).

Such small industrial-urban centres like CLW or CCW provide occupation (main or subsidiary) mainly to the people living within a radius of 15 miles of the centre. Though the number of Santals employed in the CLW is negligible, a large proportion of them work as casual labourers in different construction and maintenance work in the factory and township. A sample of 440 casual labourers showed that 79% of them were original residents of villages within a radius of 7 miles and about 59% lived within 5 miles of CLW. In the case of CCW the distance of natal village of about 70% of the factory workers was within 15 miles from the industrial town.

Small industrial-urban centres not only create employment opportunity for the people of the rural hinterland but also shake up the traditional pattern of economic structure and relation in the villages to a considerable extent. In such a situation we find decline of agriculture, proliferation of occupational categories, dependence

on women to take care of agriculture, and commercialization of some rural produce.

Lack of interest in agriculture has been noticed in the villages neighbouring CLW and HC. The Brahmins and other high castes in this locality, who do not cultivate their fields themselves, and used to engage mainly Santal and Bauri labourers to cultivate the land, are finding it difficult, after the establishment of these industrial-urban centres, to procure agricultural labourers and sharecroppers. Since the labourers get higher wages in the factory work and can avoid the risk of loss in farm production in years of bad rainfalls, they are more inclined to have urban-industrial jobs which are considered more secure. Even the cultivators who till their own soil are not so keen in their agricultural pursuit as before because they know that if the crop fails they can earn their livelihood in the industrial-urban centres. The tendency to be employed in the industries and aversion to farmwork was more pronounced among the young people. When contrasted with farm income, factory income has the attraction of regularity and continuity whereas farm production is dependent on nature and is exposed to risk. This diversion of attention from the fields to the industry has caused a considerable loss in agriculture. The records of the Agricultural Extension Officer of the local Block Development Office show that the agricultural production in the surrounding villages has gone down after the establishment of CLW and HC. This phenomenon has also been observed in other areas including the CCW.

From the immediate rural hinterland a number of people work in the industry in permanent or temporary capacity or have some other non-agricultural occupations available in the urban centre. The majority of such workers continue to maintain agriculture as a main or subsidiary occupation. This gives rise to a mixed type of occupation and proliferation of occupational categories. Owing to non-sustaining capacity of land a number of men take industrial-urban jobs in the vicinity, if available, or migrate to industrial or urban centres, leaving the bulk of the farm work under the care of women. This has brought forth change in the traditional organization of labour (Das Gupta 1964 : 94-96; Das Gupta 1978 : 14-33).

The people living in the industrial-urban centres depend on the rural hinterland for supply of some commodities like rice, vegetables, milk, earthen pots, etc. and this demand creates better market facilities for the producers of the rural sector. There is great

demand of vegetables in the industrial township and many, including the tribal people, living in the neighbouring villages have taken up vegetable gardening in larger scale. It is interesting to note that in the tribal villages around an urban centre, the *diang* or rice-beer has become a commercial item. Rice-beer is the universal drink of the tribes and is known by different names in different areas. It is also an essential item of their rituals. In every tribal house rice-beer is prepared for home consumption. It is also sold in the local weekly markets in limited quantity. But in the industrial-urban centres there is considerable demand for this local rice-beer, and it has turned out to be an important commercial item.

The industrial-urban centres not only make inroads in the economic sphere of the rural hinterland but also in the socio-political and magico-religious aspects. World changes in family patterns suggest that industrialization and urbanization must indeed contain the prime social variables, since, whenever any movement towards them occurs, the family system moves towards some kind of nuclear pattern, i.e. diffuse kinship ties with distant relatives and an emphasis on the nuclear family unit of husband and wife with their children. Analysis of the census of the Santals of four villages in the neighbourhood of CLW shows that nuclear family, i.e. family composed of husband, wife, and unmarried children is quite high (about 30%). Nuclear family is, however, a norm in traditional Santal society. When a Santal marries, it is customary for him to live with his father for some period. It is his hope that his father will give him some land or capital so that he can set up his own family. A married son will move out as soon as he has an economic base to be able to do so. Industrialization and urbanization have expedited this process of nucleation and industrial or urban workers have been able to shorten the period of patrilocal residence and to move into separate households earlier than farm equivalents on income-basis. Inequality in income of two brothers or such members employed in the industrial or urban centres is sometimes a dominant factor for family disintegration and formation of nuclear families.

In India, the ethnic groups in general are rigid in the matter of inter-ethnic marriages. In industrial and urban situation contact between various communities living in the industrial-urban centres or in the neighbouring rural areas is imminent and cases of inter-ethnic marriages are reported more frequently. Incidence of such marriages is not very high as has been found in our samples from

CCW and CLW (little above 4%). In CLW and HC a number of cases have come to light where Santal girls married or indulged in irregular sex union with the people of other communities. Such unions were almost unknown in Santal society before the establishment of industrial-urban centres. The punishment for such offence is ex-communication of the offender and her family. However, the family can again be accepted by the society on payment of a fixed fine and offering a communal feast. The offender is considered dead and cannot live in the village nor can the family maintain any relation with the offender. This punishment is known as *vandan*. Since the inception of the CLW and HC six such cases of irregular sex union of Santal girls with other communities have been dealt with by the *pargana* council (traditional highest Court of Justice which govern about 40 villages or so) and all the girls were ex-communicated. In tribal rural hinterland such union is a one way traffic involving only Santal girls. Marriage of a Santal boy with a girl of an other caste or community has not yet been reported. Still now the Santals accept the verdict of the *pargana* and there was no instance where a Santal challenged the justice of the tribal *pargana* council and went to the formal court of law.

A sense of consciousness with regard to dress while coming to town is observed among the people living in the rural hinterland. When in the town, they try to be properly dressed and maintain the spirit of modesty according to urban standard; whereas they do not bother much while living in the village or going to some other places in rural atmosphere. The leisure and recreation pattern has also changed to some extent in the surrounding rural areas of industrial-urban centres. Such centres provide a variety of entertainment and recreation like cinema shows, theatrical and musical performances, industrial exhibition, etc. which attract a good number of rural folk of the adjacent villages even from a distance of about 15 miles. The town people also visit the neighbouring villages to witness the festivals there, particularly the tribal festivals which are accompanied by community dance and music. An industrial-urban worker, besides sharing these recreational facilities with his co-villagers, can also become a member of the recreational institute in the town and have access to the library, reading room, indoor and outdoor games, etc. Location of industrial-urban centres in the vicinity accelerates the pace and opportunity of education; in the rural hinterland of an industrial-urban centre there is a marked

tendency of sending more children for formal schooling in comparison with the traditional villages.

Besides these socio-cultural processes and linkages, the small industrial-urban centres provide a favourable base for the functioning of trade union and ethnic-based political forces. When such centres are located in tribal belts where the tribal people are placed in a complex inter-ethnic milieu along with other non-tribal castes, a new tribal solidarity different from the traditional one is forged. In Singhbhum and Santal Parganas this solidarity is often fostered by the regional political forces like All India Jharkhand party and Birsa Seva Dal. The tribal people working in mines, factories and other urban centres in this region are told by these forces that although they are decisively the majority community in their villages and in the region, they have access only to the lower positions of unskilled and semi-skilled workers. In such a context, they learn that they can preserve their self-interest better by maintaining the ethnic identity, rather than through conventional class-based trade union movement. Under this influence they behave more as an ethnic pressure group than as an organized working class (Das Gupta 1978 : 114). Though the industrial and urban centres act as a catalytic agent in politicizing the people living in the rural hinterland, they cannot forge the workers coming from the rural areas into a working class and activate the trade union movement in this line. The basically rural character of ethnicity enters the urban and industrial milieu in almost all parts of India including metropolitan areas. This is why Bose has called Calcutta an immature and imperfect metropolis (Bose 1968 : 85).

Industrialization or urbanization also make inroads in the belief system prevalent in the rural areas. It creates a rational and naturalistic viewpoint and attenuates the magico-religious practices. Generally speaking, in the villages around CLW and HC and also in the villages on the vicinity of CCW in Singhbhum, beliefs and practices among the Santal and the Ho respectively regarding witchcraft have not much changed after the establishment of the industrial-urban centres despite the fact that a few relatively well-educated Santals and Hos, most of whom are factory workers, hold somewhat different views regarding this. The factory workers receive free medical treatment in the industrial town hospitals and most of them avail themselves of the same while still not disbelieving wholly the existence of the witch and the treatment of an *ojha* or traditional

medicineman who tries to cure the disease by administering herbal medicine, and if it fails, attempts to exorcize evil spirits by spells or various supernatural means. Orans (1959 : 223-227), who worked among the Santal industrial workers of Jamshedpur, Bihar, observed that in the Santal villages the beliefs and practices regarding witchcraft have not much changed during the last fifty years except in case of a few relatively well-educated Santals; but there has been an increasing skepticism toward witchcraft in the town bustees and a quasi-naturalistic attitude toward it in the city.

In the villages around CLW and HC the Santal festivals and propitiation of household and other deities take place as before without any marked change. Only there is attenuation in the sphere of physical presence during the observance of the festivals. This is owing to the lack of time in the case of industrial and urban job holders. Industrialization and urbanization are likely to lead to a decline of belief in supernaturalism, and participation in communal religious festivals is likely to be gradually replaced by an attitude of more rational utilization of time and resources and a more rational approach to the nature of the universe. This expected influence of industrialization and urbanization was only partly met in case of the tribal rural hinterland of the industrial-urban centres under consideration.

Table 1

Occupational Categories of the Santals of Simjuri, Namakesia, Tarra and Mohanpur Villages

| Sl. No. | Occupation | No. of persons engaged | | Percentage* | Average age | Literacy % |
|---------|--|------------------------|--------|-------------|-------------|------------|
| | | Male | Female | | | |
| 1. | Agriculturist | 60 | 158 | 42.41 | 32.8 | 7.3 |
| 2. | Casual labourer in C L W (main) and agriculturist (subsidiary) | 47 | 22 | 13.42 | 25.3 | 26.0 |
| 3. | Casual labourer in C L W | 33 | 22 | 10.70 | 22.9 | 32.7 |
| 4. | Cowherd | 28 | 10 | 7.39 | 11.5 | 7.8 |
| 5. | Permanent worker in C L W (m) and agriculturists (s) | 33 | - | 6.42 | 32.8 | 72.7 |
| 6. | Permanent worker in C L W | 25 | - | 4.86 | 34.4 | 80.0 |
| 7. | Agriculturist (m) and casual labourer in C L W (s) | 15 | 6 | 4.08 | 29.5 | 38.0 |
| 8. | Cowdung cake seller | - | 7 | 1.36 | 40.4 | 14.2 |
| 9. | Agriculturist (m) and agricultural labourer (s) | 3 | 4 | 1.36 | 41.1 | 0 |
| 10. | Agriculturist (m) and cowdung cake seller (s) | - | 7 | 1.36 | 33.2 | 0 |
| 11. | Agricultural labourer (m) and agriculturist (s) | 3 | 2 | 0.97 | 30.6 | 0 |

Table 1 (Continued)

| Sl. No. | Occupation | No. of persons engaged | | Percentage* | Average age | Literacy % |
|---------|--|------------------------|--------|-------------|-------------|------------|
| | | Male | Female | | | |
| 12. | Casual Labourer in C L W (m) and agricultural labourer (s) | 3 | 2 | 5 | 0.97 | 35.8 |
| 13. | Agriculturist (m) and milk seller (s) | 2 | 2 | 4 | 0.78 | 29.7 |
| 14. | Permanent worker in Bihar pottery at Rupnarayanpur | - | 3 | 3 | 0.58 | 24.30 |
| 15. | Carpenter | 3 | - | 3 | 0.58 | 42.0 |
| 16. | Tailor | 2 | - | 2 | 0.39 | 20.0 |
| 17. | Rickshawpuller | 2 | - | 2 | 0.39 | 20.0 |
| 18. | Agricultural labourer | 1 | 1 | 2 | 0.39 | 37.0 |
| 19. | Agricultural labourer (m) and cowherd (s) | 2 | - | 2 | 0.39 | 14.0 |
| 20. | Agriculturist (m) and cowherd (s) | 2 | - | 2 | 0.39 | 17.0 |
| 21. | Milk seller | - | 1 | 1 | 0.19 | 55.0 |
| 22. | Worker in coalfield | 1 | - | 1 | 0.19 | 35.0 |
| 23. | Cowherd (m) and casual labourer in C L W (s) | - | 1 | 1 | 0.19 | 12.0 |
| 24. | Beggar | - | 1 | 1 | 0.19 | 50.0 |
| Total | | 265 | 249 | 514 | 99.95 | |

*Because of rounding these do not add up to 100.

Table 2
Occupational structure

| Village | Caste or Tribe | No. of families | Agriculture (only occupation) No. of families | Mine labour (Primary or subsidiary occupation) No. of persons | Other occupation |
|---------------|-------------------|--------------------|--|--|---|
| BARA JAMDA | Kumhar | 25 | 1 | 26 | Agriculture; Pottery; Service in Railway and Forest Office. |
| | Bhuiya | 16 | 3 | 18 | Agriculture; Grain parching; Masonry; Business of timber; Service in Railway and Forest office. |
| | Gop | 13 | — | 13 | Cow rearing; Agriculture; Domestic service; Service in Railway and Forest Office. |
| | Dhobi | 1 | — | 1 | Agriculture; Washerman. |
| KHAS JAMDA | Ho | 30 | 9 | 23 | Agriculture; Agricultural labourers; Service in Railway and Forest Office. |
| | Lohar | 2 | — | 3 | Blacksmithy |
| | Gop | 1 | — | 2 | |

Table 3
Occupational Structure (Industrial Village)

| Sl. No. | Occupational categories | Men | Women | Total | %* |
|---------|---|-----|-------|-------|-------|
| 1. | Agriculture | 22 | 68 | 90 | 35.86 |
| 2. | Factory worker (m) and Agriculture (s) | 27 | 5 | 32 | 12.75 |
| 3. | Casual labourer in factory.(m) and Agriculture (s) | 17 | 8 | 25 | 9.96 |
| 4. | Agriculture (m) and casual labour in the factory (s) | 12 | 11 | 23 | 9.16 |
| 5. | Agriculture (m) and Agricultural labourer (s) | 3 | 15 | 18 | 7.17 |
| 6. | Agriculture-(m) and <i>Diang</i> selling (s) | — | 11 | 11 | 4.38 |
| 7. | Cattle rearing (includes 2 male Dasi) | 7 | 1 | 8 | 3.19 |
| 8. | Casual labourer in the factory | 5 | 2 | 7 | 2.79 |
| 9. | Service in D V C , Post and Telegraph, etc. (m) and Agriculture (s) | 6 | — | 6 | 2.39 |
| 10. | <i>Diang</i> selling (m) and Agriculture (s) | — | 4 | 4 | 1.59 |
| 11. | Cattle rearing (m) and Agriculture (s) (includes 2 Dasi) | 3 | — | 3 | 1.20 |
| 12. | Agriculture (m) and Tussar and Lac rearing (s) | 2 | 1 | 3 | 1.10 |
| 13. | Factory worker | 2 | 1 | 3 | 1.10 |
| 14. | Agricultural labourer | — | 2 | 2 | 0.80 |
| 15. | <i>Diang</i> selling | — | 2 | 2 | 0.80 |
| 16. | Agriculture (m) and Cattle rearing (s) | 2 | — | 2 | 0.80 |
| 17. | Domestic servant | — | 2 | 2 | 0.80 |
| 18. | Agriculture (m) and Service elsewhere (s) | 1 | — | 1 | 0.40 |

Table 3 (Continued)

| Sl. No. | Occupational categories | Men | Women | Total | %* |
|---------|--|-----|-------|-------|--------|
| 19. | Casual labourer in the factory (m) and Agricultural labourer (s) | 1 | — | 1 | 0.40 |
| 20. | Factory worker (m) and Agricultural labourer (s) | — | 1 | 1 | 0.40 |
| 21. | Agricultural labourer (m) and Casual labourer in the factory (s) | — | 1 | 1 | 0.40 |
| 22. | Diang selling (m) and casual labourer in the factory (s) | — | 1 | 1 | 0.40 |
| 23. | Tailoring (m) and Agriculture (s) | 1 | — | 1 | 0.40 |
| 24. | Cycle repairing (m) and Agriculture (s) | 1 | — | 1 | 0.40 |
| 25. | Tailoring | 1 | — | 1 | 0.40 |
| 26. | Tea boy | 1 | — | 1 | 0.40 |
| 27. | Business of cloth | 1 | — | 1 | 0.40 |
| Total | | 115 | 136 | 251 | 100.00 |

m—main s—subsidiary

*Because of rounding does not add up to 100.

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URBANIZATION IN NORTH BENGAL

Manas Dasgupta

I Introduction

North Bengal is a region with varied landscape, terrain, morphology, economic and socio-cultural characteristics. At present this northernmost region of the state of West Bengal consists of five districts, namely, Coochbehar, Jalpaiguri, Darjeeling, West Dinajpur and Malda. The whole region may be broadly grouped into three areas : (i) hill areas (ii) sub-Himalayan areas and (iii) plains. The hill areas consist of three sub-divisions of Darjeeling and some parts of Jalpaiguri. In this area we find three urban centres, namely Darjeeling, Kalimpong and Kurseong. A stretch of the hill region in the plains is known as *Terai* and the most important urban centre of North Bengal, namely, Siliguri, is situated in the Terai region. The sub-Himalayan area comprises some parts of the districts of Jalpaiguri and Coochbehar. In this region the most important urban centres are Jalpaiguri, Alipurduar, Dhupguri, Mainaguri and Mal. The plain area comprises Malda and West Dinajpur and major parts of Coochbehar and some parts of Jalpaiguri. The most important urban centres of this region are Coochbehar, Balurghat, Raigunj and Malda. Some towns of North Bengal are very old, like Malda, Coochbehar, Balurghat, Dinhata and Mekhligunj. Some came into existence after the English annexed this part of the State in 19th century. These are Darjeeling, Kurseong, Kalimpong, Jalpaiguri and Alipurduar. Some towns came into being to serve the interests of tea and timber industries, like Mal, Dhupguri and towns of the Duars. Some were trading centres before the British came to this area e.g., Dinhata, Mekhligunj, Mathabhanga and Haldibari. Some grew into prominence because of partition and the ensuing refugee movement, e.g., Siliguri. Thus, both history and geography had to a considerable extent shaped the population composition, nature and characteristics of the towns of North Bengal. The common charac-

teristics of the towns are that these towns are mostly 'market towns' and not 'industrial towns'.

The total area of North Bengal is 21,625 km², which is about 14.61% of the total area of the state. The growth of population in North Bengal during the last 30 years is shown in Table 1. Analysis further reveals that population growth pattern of North Bengal has been more or less consistent, which helped to maintain its share of the State population. In 1951, 1961, 1971, and 1981, it accounted for 15.08, 15.88, 16.94 and 17.30%, respectively, of the total population of the state. Amongst the districts there are considerable variations. For example, the growth rate recorded at Coochbehar district over the period 1951 to 1981 was 62.29%, and in case of West Dinajpur, 51.05%. The decadal variation of population is shown in Table 2.

II Urbanization Process in North Bengal

The process of urbanization in North Bengal has been slow as compared to the rest of state of West Bengal. In North Bengal, nearly 91% of the population was concentrated in villages according to 1971 Census; in 1981 the rural population in North Bengal amounted to 89% of the total population. It means that about 9% in 1971 and 11% in 1981 were urban population in North Bengal. This percentage is considerably lower than the state average, though indicating considerable increase over the period beginning from 1941 Census. This is shown in Table 3.

Between 1941 and 1951, an increase of about 96% in urban population was recorded, which also coincided with the growth of Siliguri town as the major urban centre. This is primarily due to the influx of refugees from the then East Pakistan. During the period of 1971-81 also there had been considerable increase in urban population.

Comparative figures of different districts in terms of urbanization are given in Table 4.

It appears that among the districts Darjeeling has the highest percentage of urban population, which is higher than the state average. But in Malda and Coochbehar the process of urbanization is very slow and the proportion of urban people in these two districts is lower than the North Bengal average or the State average, which reflects the slow economic development of these areas.

Urban population in North Bengal is mainly concentrated in 29 urban centres. The number of urban centres was 26 in 1971, 28 in 1971 and 29 in 1981 census. In 1981, we find, for the first time, the

listing of two Class I cities in North Bengal. The distribution of urban centres according to six size classes of cities/towns, are given in Table 5.

Certain tentative conclusions can be drawn from Table 5.

(1) In 1961, none of the urban centres in North Bengal belonged to Class I category of towns with more than one lakh population. There was only one town of more than 50,000 population (i.e., Siliguri), while the bulk of the population lived mainly in Class III towns with a share of nearly 60% of total urban population.

(2) In 1971, the number of towns belonging to Class II increased from one to five, while the number of class III towns, correspondingly declined from 8 to 5. Towns with population below 20,000 were 17 in number in 1961, but their number went up to 20. There was only one Class II town in each district of North Bengal in 1971, and the five Class III towns were located in three districts Darjeeling, Jalpaiguri and West Dinajpur.

(3) By 1981, we find two towns Siliguri and Balurghat in Class I. In these two towns about 29% of the urban population of North Bengal reside. It appears that a substantial proportion of the urban population are now living in Class I and Class II towns, about 72.5%, while the remaining 27.5% are distributed in Classes III, IV, V and VI. This shows increased concentration of urban population in North Bengal.

Table 6 presents data on population growth from a selected number of towns

On the basis of Table-6, the towns of North Bengal may be divided into five broad categories : (1) Dynamic Towns, which have experienced a rate of growth of population which is higher than the average in the towns of North Bengal; (2) Normal Growth Towns whose rate of growth conforms the average of other towns of West Bengal; (3) Towns which are relatively static, where the rate of growth of population is less than the average for West Bengal; (4) Depopulated Towns, whose population has declined during the last thirty years; (5) Newly emerging towns. Table 7 indicates the classification of towns on that basis.

Stagnation of Jalpaiguri, an old town, may be explained in terms of the fluctuating fortunes of the tea industry. It emerged as a very important town in the nineteenth century due to the growth of tea plantation. But after independence many tea gardens have changed hands and have come under the possession of absentee owners.

Further, no industry has emerged to take the place of tea. Hilli's gradual decay is largely due to its precarious geographical location near the international border. The emergence of new town centres, Saktigarh-Dabagram, which was not noted in the census in the year 1951, but whose population by 1981 exceeded that of the district head quarters Jalpaiguri is an interesting phenomenon, which is effectively an extension of the Siliguri town. Another emerging town centre is Bagdogra, whose growth is mainly due to military concentration. Islampur has become a very important traffic centre situated on the highway to and from Calcutta.

A further reclassification can be made on the basis of Census data of 1981 in comparison to 1971. This is to categorize the towns according to outmigration and immigration. According to the 1971 Census, out of a total number of 3,119 cities and towns of India, 112 cities and towns had a decline in population during the decade and 320 cities and towns had their growth rate below 15%. All these 432 town and cities have been called 'outmigrating'. These constituted 13.9% of all urban areas and 9.8% of urban population of the country. In West Bengal during 1961-1971 Census there were 41 outmigrating towns which constituted 18.4% of the 223 cities and towns of the state. During 1971-1981 the number of outmigrating towns declined to 23. Table'8 gives a list of 'inmigrating', 'outmigrating' and 'normal' towns, based on decadal variations in population of more than, less than and equal to, 15.0% respectively.

III. Urbanization Process of North Bengal and Importance of Siliguri as an Urban Centre .

Siliguri's geographical location is very important to understand its phenomenal growth in the post-partition Bengal. In 1901, it was a mere village, covered with forests; but within sixty years it emerged as the largest urban centre of North Bengal surpassing the older urban centres like Jalpaiguri, Darjeeling, Kalimpong, Coochbehar and Malda. Though administratively a mere subdivisional town, its importance lies in its role as a commercial centre at the gateway to Duars, Bhutan, Sikkim, Darjeeling, Kalimpong and other hill areas of Bengal, Assam, Arunachal and other states of North East India, which provides a vital link to Calcutta. The sudden increase of population of Siliguri may be ascribed to the partition of Bengal in 1947, and the consequent huge influx of refugee population from the adjoining areas of East Pakistan (or present Bangladesh). After partition, Siliguri has become Assam's link with the rest of India,

and its importance further increased after the Sino-Indian Border War of 1962. Table 9 gives the growth of population of the town, during 1901 to 1981.

In fact, both Bagdogra and Dabagram-Saktigarh (a part of Jalpaiguri district) are extensions of Siliguri, and may be included as its 'action area'.

From Table 10, it is seen that the population of Siliguri along with these extensions has crossed 3,50,000 in 1981 Census and, other things remaining the same, it is likely to exceed 5,00,000 by 1991.

A significant part of this increase is by way of migration. The nature of migration to Siliguri may be better understood from the results of the Sample Survey undertaken by the Siliguri-Jalpaiguri Development Authority in 1978 based on a sample of 3,697 (Table 11).

The gender ratio in Siliguri town has increased from 651 women per 1,000 men in the 1961 census to 736 in 1971 and 793 in 1981. The low proportion of women is largely due to large scale male-specific migration to Siliguri, which has also led to a rapid increase in land prices and the growth of slum population. The middle part of Siliguri is mostly occupied by businessmen and contractors, who can afford to pay high land price; but a major part of the growth of population is occurring in the outskirts of the town especially in the Dabagram and Saktigarh area. Slums have developed all over the town. Previously, in Siliguri there was no 'official' slum area. But after 1981 Census some areas are denoted as slums. The slums that have grown in Siliguri are Debasis Colony, Jyotinagar Colony, Sramiknagar, Das Colony, Harijan Colony and part of Deshbandhupara. In these areas, sanitation facilities are almost non-existent, and near-about 35% of the population use open air for defecation. Water is a scarce commodity; for about 10 per cent of population it is necessary to walk at least 2 km. each way to get water for drinking.

Taking the average of Census Reports from 1961 to 1981, it is observed that in West Bengal outside the Calcutta Metropolitan and Assansol-Durgapur area, 15% of total workers are engaged in the industrial sector. Taking this as the average it is observed that five towns out of 29 towns of North Bengal have an industrial population which is higher than this average : Siliguri, Alipurduar, Englishbazar, Old Malda, and Raiganj.

It is observed that most of the towns outside Calcutta and

Durgapur-Asansol area are 'service' and/or 'commercial' towns, in view of a large percentage of workers in these two sectors. This is largely due to migration and high population growth which are not matched by an increase in industrial employment opportunities.

If 'P' be the population of a town and 'N' number of workers in a certain sector (i.e., service or trade and commerce), an increase in N will diminish the ratio of P/N. It may be mentioned that while employment in industry does not depend on the population of the town, employment in 'service' or tertiary sectors like trade, commerce, transport etc. depends considerably upon the total population of the area. For example, retail shops cannot increase in a town without considering the population growth.

Taking P/N ratio for all the towns in the state as the norm for a particular service, one can measure the deviations of this particular ratio for a given service for a town from the state average.

Tables 12 to 14 provide such measures for various towns in North Bengal and for three services—retail trade, whole-sale trade and transport—in case of 1971, the results are as follows :

(1) The 'surplus' or 'deficiency' of employment classified in 24 towns of North Bengal shows that retail trade is the most important source of employment in most of the towns of North Bengal (i.e., 23 out of 24 towns). Retail trade is the most important sector in terms of employment.

(2) Nine towns of North Bengal may be termed as wholesale oriented towns from the population-employment ratio for the wholesale trade. Of these, five towns of North Bengal possess a high surplus ratio in wholesale trade, headed by Siliguri.

(3) six towns of North Bengal are mainly transport-oriented, Siliguri being the most important among those. Dhupguri possesses a very high surplus in transport employment, while Kurseong has a medium surplus.

Summary

(1) The process of urbanization in North Bengal has been slow as compared with the rest of state of West Bengal. But Darjeeling District, among other districts of North Bengal, has the highest percentage of urban population and the percentage is higher than that in the rest of the state. Malda has the lowest rate of urbanization among the districts of North Bengal.

(2) Two Class I towns have emerged from the 1981 Census. These towns are Siliguri and Balurghat. Siliguri is the most important town in North Bengal.

(3) There are considerable differences among the 29 towns in terms of growth of population. Some towns are dynamic and have experienced a high rate of growth, some others are static, while some towns are even depopulating. Jalpaiguri is a relatively static town and Hilli is a depopulated one.

(4) Siliguri emerged as the most important urban centre after independence surpassing the older towns like Jalpaiguri, Cooch-behar and Malda.

(5) The towns of North Bengal may be termed as 'market towns' as opposed to 'industrial towns'. Industries have not developed in North Bengal because of certain historical reasons. In Siliguri and most of the urban centres there are too many retail shops and informal trade, which is a reflection of the phenomenon of 'urban disguised unemployment'.

Table 1
Growth of Population in North Bengal During 1951-1981
(in '000)

| Districts | Area Sq. Km. | 1951 | 1961 | 1971 | 1981 |
|---------------|-----------------|---------|---------|---------|---------|
| Darjeeling | 3,386 | 459.6 | 624.6 | 781.8 | 1,024.2 |
| Coochbehar | 3,075 | 668.0 | 1,319.8 | 1,414.2 | 1,771.6 |
| Jalpaiguri | 6,245 | 916.7 | 1,369.3 | 1,750.1 | 2,214.8 |
| West Dinajpur | 5,206 | 976.9 | 1,323.8 | 1,857.9 | 2,404.9 |
| Malda | 3,713 | 937.6 | 1,221.9 | 1,612.7 | 2,031.8 |
| North Bengal | 21,625 | 3,959.7 | 5,549.4 | 7,418.7 | 9,447.6 |

Source : Census Reports of various years.

Table 2
Decadal Variation in Population (in percentages)

| District | 1901- 1911 | 1911- 1921 | 1921- 1931 | 1931- 1941 | 1941- 1951 | 1951- 1961 | 1961- 1971 | 1971- 1981 |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Darjeeling | 5.31 | 5.12 | 12.85 | 17.72 | 17.58 | 35.90 | 25.16 | 28.74 |
| Coochbehar | 4.58 | -0.07 | -0.20 | 8.43 | 4.73 | 52.45 | 38.17 | 25.27 |
| Jalpaiguri | 21.30 | 4.93 | 6.47 | 14.42 | 8.13 | 48.27 | 28.76 | 26.11 |
| West Dinajpur | 6.78 | -12.13 | 7.23 | 11.92 | 17.03 | 35.51 | 40.50 | 29.10 |
| Malda | 15.72 | -1.77 | 4.99 | 17.19 | 11.05 | 30.33 | 31.98 | 26.19 |
| West Bengal | 6.25 | -2.91 | 8.14 | 22.93 | 13.22 | 32.80 | 26.87 | 22.97 |

Source : Census Reports of various years.

Table 3
Percentage of Urban Population in Total Population in
North Bengal and Decadal Variation from Census
Reports

| Year | Percentage of popu- lation (urban) | Total urban (in lakhs) | Decadal vari- ation (in %) |
|------|---------------------------------------|---------------------------|-------------------------------|
| 1931 | 3.4 | 1.06 | - |
| 1941 | 4.1 | 1.47 | 38.7 |
| 1951 | 7.3 | 2.88 | 96.0 |
| 1961 | 8.8 | 4.90 | 70.0 |
| 1971 | 9.3 | 6.87 | 40.3 |
| 1981 | 11.0 | 10.81 | 57.3 |

Source : Census Reports of various years.

Table 4
Percentage of Urban Population in Different Districts of
North Bengal According to 1981 Census

| District | Percentage of urban population to total population |
|------------------------|---|
| 1. Darjeeling | 27.86 |
| 2. Jalpaiguri | 14.95 |
| 3. West Dinajpur | 11.19 |
| 4. Coochbehar | 6.80 |
| 5. Malda | 4.78 |
| 6. West Bengal Average | 26.49 |

Source : Census of India, 1981.

Table 5
Distribution of Towns/Cities of North Bengal According
to Size Class

| Cities/Town size groups | | Number of towns/cities | | |
|-------------------------|------------------|------------------------|------|------|
| | | 1961 | 1971 | 1981 |
| Class-I | 1 lakh and over | Nil | Nil | 2 |
| Class-II | 50,000 to 99,999 | 1 | 5 | 7 |
| Class-III | 20,000 to 49,999 | 8 | 5 | 7 |
| Class-IV | 10,000 to 19,999 | 6 | 8 | 6 |
| Class-V | 5,000 to 9,999 | 7 | 8 | 4 |
| Class-VI | Below 5,000 | 4 | 2 | 3 |

Source : Computed from the different Census Reports.

Table 6
Population Growth of Some Selected Towns in North Bengal in 1981 in Comparison with 1951

| Cities/Towns of North Bengal | Population 1951 | Population 1981 | Percentage change during 1951-1981 |
|------------------------------|-----------------|-----------------|------------------------------------|
| 1. Balurghat | 18,121 | 1,04,646 | 477 |
| 2. Siliguri | 32,480 | 1,54,378 | 375 |
| 3. Raiganj | 15,473 | 60,343 | 289 |
| 4. Alipurduar | 24,886 | 71,575 | 187 |
| 5. Malda | 30,663 | 79,010 | 157 |
| 6. Coochbehar | 33,242 | 62,127 | 86 |
| 7. Kalimpong | 16,677 | 28,885 | 73 |
| 8. Darjeeling | 33,605 | 59,608 | 71 |
| 9. Jalpaiguri | 41,259 | 61,743 | 49 |
| 10. Hilli | 8,346 | 6,061 | -27 |

Source : Census Reports of 1951 and 1981.

Table 7
Categories of Towns in North Bengal

| | |
|--------------------------------|--|
| Dynamic Towns : | (1) Balurghat (2) Siliguri (3) Raiganj (4) Alipurduar |
| Towns with Normal Growth : | (1) Malda (2) Coochbehar (3) Darjeeling (4) Kalimpong (5) Kurseong (6) Dinhata |
| Relatively Stagnant Towns : | (1) Jalpaiguri (2) Tufanganj (3) Mathabhanga (4) Haldibari (5) Dalkhola (6) Mekhliganj (7) Kaliachak (8) Mainaguri |
| Depopulated Towns : | (1) Hilli |
| Newly Emerging Urban Centres : | (1) Dabagram-Saktigarh (2) Gangarampur (3) Islampur (4) Kaliyaganj (5) Dhupguri (6) Mal (7) Bagdogra |

Table 8
Outmigrating, Inmigrating and Normal Towns of North Bengal According to Decadal Variation of Population During 1971-1981

| Inmigrating Towns (Decadal growth 15 percent) | Outmigrating Towns (Decadal growth below 15 percent) | Relatively Normal Towns (Decadal growth of about 15 percent) |
|---|--|--|
| 1. Siliguri | 1. Jalpaiguri | 1. Coochbehar |
| 2. Balurghat | 2. Tufangunj | 2. Darjeeling |
| 3. Alipurduar | 3. Mainaguri | 3. Kalimpong |
| 4. Raigunj | 4. Dalkhola | 4. Kurseong |
| 5. Dhupguri | 5. Hilli | 5. Malda |
| 6. Mal | 6. Kaliachak | |
| 7. Islampur | 7. Haldibari | |
| 8. Kaliyagunj | | |
| 9. Gangarampur | | |
| 10. Bagdogra | | |

Table 9
Growth of Population in Siliguri Municipal Area

| Census Year | Number of People |
|-------------|------------------|
| 1901 | 784† |
| 1921 | 2,000† |
| 1931 | 6,067 |
| 1941 | 10,487 |
| 1951 | 32,480 |
| 1961 | 65,471 |
| 1971 | 97,462 |
| 1981 | 1,54,378 |

† Approximate figures.

Table 10

**Projected Population of Siliguri and its Action Area in
1991 and 2001 (in '000).**

| Area | 1961 | 1971 | 1981 | 1991 | 2001 |
|-------------------------|-------|-------|-------|-------|-------|
| Siliguri (Municipality) | 65.5 | 97.5 | 154.4 | 220.6 | 297.3 |
| Siliguri P.S. | 26.3 | 35.4 | 75.0 | 109.8 | 155.0 |
| Dabagram Mouza | 13.0 | 38.8 | 76.4 | 124.4 | 193.4 |
| Binnaguri | 8.6 | 12.7 | 20.0 | 31.1 | 48.3 |
| Bagdogra (Urban) | 1.5 | 5.6 | 8.7 | 12.9 | 18.2 |
| (Rural) | 12.9 | 14.5 | 16.2 | 19.5 | 24.2 |
| Total | 127.8 | 204.5 | 350.7 | 518.3 | 736.4 |

Source : Census Reports of various years.

Table 11

Migration to Siliguri for Livelihood

| Origin | Less than One Year | 1-3 Years | 4-6 Years | 6-9 Years | 10+ Years | Total |
|----------------|-----------------------|--------------|--------------|--------------|--------------|-------|
| North Bengal | 17 | 36 | 38 | 7 | 73 | 171 |
| South Bengal | 13 | 36 | 27 | 8 | 55 | 139 |
| Assam | 14 | 30 | 83 | 22 | 11 | 160 |
| Bihar and U.P. | 20 | 95 | 145 | 164 | 233 | 657 |
| Bangladesh | 34 | 112 | 136 | 181 | 1,761 | 2,224 |
| Rajasthan | 16 | 40 | 63 | 57 | 170 | 346 |
| Total : | 114 | 349 | 492 | 439 | 2,303 | 3,697 |

Source : Siliguri-Jalpaiguri Development Authority.

Table 12

**Surplus and Deficits in Retail Trade According to the
1971 Census**

| High Surplus (Deviations 50 to 69%) | Medium Surplus (Deviations 30 to 40%) | Low Surplus (Deviations 10 to 29%) |
|-------------------------------------|---|--|
| 1. Dinhata 2. Mal | 1. Siliguri 3. Dhupguri 5. Coochbehar 7. Raigunj | 2. Alipurduar 4. Gangarampur 6. Maldá 8. Kaliyagunj |
| | | 1. Jalpaiguri 2. Mekhligunj 3. Falakata 4. Kalimpong 5. Mainaguri 6. Balurghat 7. Darjeeling |

Table 13

**Surplus and Deficits in Wholesale Trade According to
the 1971 Census**

| High Surplus (Deviation 50 to 69%) | Medium Surplus (Deviation 30 to 49%) | Low Surplus (Deviation 10 to 29%) |
|--|--------------------------------------|---|
| 1. Siliguri 3. Falakata 5. Tufangunj | 2. Islampur 4. Haldibari | 1. Gangarampur 2. Raigunj 3. Kaliyagunj |
| | | 1. Mainaguri (including Domohani) |

Table 14

**Surplus and Deficits in Transport According to the 1971
Census**

| High Surplus (Deviation 50 to 69%) | Medium Surplus (Deviation 30 to 49%) | Low Surplus (Deviation 10 to 29%) |
|------------------------------------|--------------------------------------|-----------------------------------|
| 1. Siliguri 2. Dhupgun | 1. Kurseong 3. Haldiban | 2. Mainaguri 1. Mal |

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DEVELOPMENT, URBANIZATION AND RURAL-URBAN RELATIONSHIP IN A PLANTATION DOMINATED ECONOMY- MYTH AND REALITY : THE CASE OF JALPAIGURI DISTRICT IN NORTH BENGAL

Asim Chaudhuri

The purpose of this research is to examine the possible contributions that the tea plantation industry might have made to the overall development of the economy of Jalpaiguri district, especially to urbanization. Let us begin by clarifying the concepts used here.

1 Urbanism and Ruralism

An ECAFE document has defined urbanism in these words : 'In its most simple and demographic sense, urbanization can be defined as the process whereby population tends to agglomerate in clusters of more than a designed size.'¹ Warren S. Thompson defines urbanization in the *Encyclopaedia of Social Sciences* as the 'movement of people from communities concerned chiefly or solely with agriculture to other communities, generally larger, whose activities are primarily centred in government, trade, manufacture of allied interests.'² The criteria used by the Indian Census authorities for defining an urban area contain elements from both of these definitions.³

It will be seen from above that in India as in most other countries urban areas of habitation are distinguished from rural areas of habitation primarily in terms of the number of people living there. But people's ways of making a living are also different in urban and rural communities. 'The urban segment of any population lives indirectly

from land. It must provide goods and services which can be marketed in rural areas in return for the products of land. Towns and cities have grown, some more than others, as urbanites have found more ways of producing more goods and services.⁴ In addition, towns and cities, especially, have an out-reaching and change-stimulating influence on their hinterlands. 'Ruralism conserves its isolation, while urbanism, especially industrial urbanism, encroaches upon isolation.'⁵

On the other hand, rural people extract their livelihood directly from land. Hence, 'Ruralism or peasantry involves a close and continuing bond between man and land usually in the form of familial ownership of land and a familial work organization for extracting a livelihood from land.'⁶ Says an urban sociologist :

"In rural life generally the ways of work are repeated with the seasons, as ways of living are repeated with the generations. Innovation is possible, but rare and there is little to stimulate experimentation, in fact, the usual response to either is likely to be skeptical if not condemnatory.

Villages in the less developed regions, which rarely come into contact with urban centres due to their remote location and difficulties of communication, tend to remain wholly rural or primitive in their work and ways of living. They constitute, so to say, a frontier or the outer line of extending urbanism. Urbanism crosses this frontier mainly through the expansion of industry and commerce. Development of industries in a region reduces people's dependence on land and makes possible shifts from low-paying jobs to high-paying jobs. In the wake of industrialization different types of skills develop among the working people and a dynamism is generated within the society that breaks its rural 'self-isolation' and puts it on the path of change and development. Industrialization also serves to raise the levels of living in a region. Hence, urbanization is to be viewed as the end-product of the overall economic development of an area.

In what follows we will attempt to assess the impact of the plantation industry on the urbanization of Jalpaiguri district in terms of its contributions to the overall development of its economy. The tea plantations represent large investments of capital in a predominantly rural area with a low level of productivity peculiar to pre-capitalist economic formations. Hence, it will be interesting to study the impact of the penetration of capitalist relations in a pre-capitalist society which began with the setting up of tea plantations in this

district by European merchants and also the secondary impact such plantations had in course of time on the growth and development of the economy of this district.

II Tea Plantations in Western Duars

The heartland of tea in Jalpaiguri district is known by the name of Western Duars. This tract was annexed by the British in 1864 from Bhutan and it lies to the east of the river Tista which cuts Jalpaiguri district from north to south. The Tista forms the boundary of the Duars dividing them from the permanently settled portion of the district which previous to 1869 belonged to Rangpur. The western Duars were a temporarily settled area where the colonial state was the zaminder. 'The Western Dooars are door or entrance to the hills of Bhutan and are so named in contradistinction to Eastern Dooars which forms the Goalpara district of Assam. The whole area forms a compact block between the parallels of $26^{\circ}13'$ and 27° north latitude and between $88^{\circ}13'$ and $89^{\circ}55'$ east longitude. It forms a parallelogram with sides of about 87 miles east and west and of 38 miles north and south.'¹⁸ The tea plantations of Western Duars produce 19% of the total output of Indian tea. This is a comparatively newly-settled tract into which British rule and capitalist enterprise intruded following annexation.

The new industry was imposed on the area by British merchant capitalists who were later followed by Bengali planters settled in Jalpaiguri town. Unlike the Javanese peasants under the 'culture system' of compulsory cultivation of commercial crops on a fifth of peasant holdings the local peasantry in Duars never participated in the growing of tea. The plantations here were all started by British planters on 'culturable waste land' taken in lease directly from the colonial govt. One Mr. Joseph Banks, on the basis of evidence from China and Japan, concluded that tea could be grown between the 26th and 30th parallels of latitude. When no further land was available in the Darjeeling hills where tea cultivation began in 1856, the submontane tract of Duars attracted the attention of planters. The first tea garden in the Duars was set up at Gazuldoba in 1874 by Mr. Brougham. It is hardly known now having been incorporated in a larger estate, that of Oldlabari, also owned by the Broughams. The second garden was Fulbari. Fulbari's owner was Colonel Edward Money, an enthusiast for extension of tea cultivation in Duars. Writing in the *Tea Encyclopaedia* in 1881 he declared, 'I thought years ago when I first began work there, and the place was a howling wilderness that the said western Duars would eventually

prove the best tea district in India.

From the Census Report of 1911 we know that 'Almost all the available land suited for tea cultivation in this district has now been taken up and further expansion of tea cultivation cannot be very great.'¹⁰ The Report also states that the development of tea industry in the Western Duars was most rapid between 1881 and 1891, during which period the area under tea rose from 35,683 acres to 76,158 acres. The total area under tea in the district of Jalpaiguri in 1911 was 88,000 acres although a depression in the industry somewhat checked its expansion. The early British planters, whether individual or Companies, all started tea plantations on an extensive scale as there was a plentiful supply of culturable waste lands in the Duars in those days. Land grants were liberally made by the colonial government to the intending planters at nominal rates and hence allotments were taken in extensive blocks. Nearly half (43%), of the tea gardens in the Duars are over 400 hectares in size. Tea gardens in this size group covers 64.4% of the total area under tea in western Duars. Gardens varying in size between 200 to 400 hectares constitute 41.0% of the total accounting for 30.7% of the total area under tea.

Between 1912 and 1919 many Bengali entrepreneurs of Jalpaiguri town entered the tea industry in the Duars. But, as is clear from above, by then most of the good tea growing land was already in the possession of English planters. Hence many of the latecomers had to convert 'jote' lands (ordinary cultivable lands) into tea plantations. These lands were settled as 'jote' lands under the Settlement Operations conducted between 1889 and 1895 by Mr. D.H.E. Sanders, settlement officer of the district. But the clubbing together of 'jote' lands and fencing them off for the purpose of tea culture was banned by the colonial government in 1914, obviously under pressure from the English planters. This halted the progress of tea cultivation by the native entrepreneurs who had to wait till 1924 for the expansion of their activities. The ban was lifted following a visit to Jalpaiguri of the then Governor of Bengal in 1921. But the share of the Bengali entrepreneurs in the industry was necessarily small.

"The establishment and operation of plantations require investment of capital on a large scale. The tea bushes have to be tended for a period of 5 to 10 years to fetch an economic return. It has been variously estimated that to be economic a tea factory should have at least about 10,000 maunds of green leaf to deal with in a year and this would indicate that anything from 250 acres to

300 acres of tea, depending on the yield per acre, would be necessary to support a factory.¹

Sponsored and developed by the British merchant capitalists for the lucrative export market in Europe, tea represented a large investment of English capital in the empire. Britain supplied most of the initial capital for the development of the industry. This fact accounts for the predominance of sterling companies in the tea plantations in North East India in the early years. These companies were formed in London and they managed their distant plantations with the help of seasoned planters appointed as visiting agents. But the real control of the tea industry came to rest in the hands of managing agents of Calcutta. These agency houses, like Andrew Yule, Duncan, C.A. Goodricke, to name a few, either started their own plantations or took over a large number of sterling estates. According to The Plantation Inquiry Commission (1956) :

"Thirteen leading agency houses in Calcutta control over 75% of tea production in North India; out of these 7 Companies control more than 50% and 5 Companies as much as 36% of the production. Some of these agency houses, however, now have a large number of Indian shareholders and in some cases an equal number of Indian and non-Indian members on the Board of Directors."²

Such high concentration of control over the production of tea is repeated in its marketing. Says the Plantation Inquiry Commission:

"Like the producers of tea, the distributors of tea are also organized. If tea production was to a large extent controlled by a few managing agency houses in Calcutta, its sale is largely controlled by the Tea Traders' Association who conduct the auctions in Cochin and Calcutta. Figures gathered by the Commission indicate that eight agency houses of producers in Calcutta with their associate firms purchased over 50% of tea at the Calcutta auctions in 1954. When we consider the retail distribution of tea in India, we see that 85% of it is controlled by two leading Firms."³

Table 1 shows at a glance the ownership pattern of tea companies in Jalpaiguri district as on March 31, 1933. The overwhelming dominance of Europeans in the industry is obvious; they owned and controlled 80% of the total area under tea in the district.

III Plantation Agriculture and the Trading-cum-Investment System of the Colonial Merchants

Plantation agriculture was an offshoot of 'private enterprise colonialism' of the European powers in the tropical countries of the

world. That plantation agriculture has an anti-development bias is easily proven from the histories of the ex-colonies of Asia, Latin America and Africa. All these countries had large and thriving plantations of tea, coffee, sugar, tobacco, rubber or cocoa that were started by European merchants in the colonial days either with slaves, indentured labour or free labour. But in each of these countries the contribution of these plantations to the over-all development of their respective economies was marginal if not negative. In fact, in a number of countries, the existence of a large plantation sector hindered modernization of agriculture and industrialization and hence perpetuated underdevelopment. This underdevelopment-bias of plantation agriculture has its origin primarily in the fact that investments in plantations form an integral part of the massive trading-cum-investment system constructed by European merchant capitalists in the days of old Imperialism chiefly as an instrument of exploitation of the vast natural resources of the colonies. All acts of investment by merchants are auxiliary to their trading activities. Hence, these rarely benefit the countries where they are made.

The essentially auxiliary character of such investments is clearly seen in the fact that,

"The objects of investment had chiefly been development of primary production such as mining and plantation economy, railway, telegraph and harbour building—all capital absorbing projects in high degree—and to some extent of industries engaged in processing of raw materials."¹⁴

Similarly, the cultivation and manufacture of tea in India was undertaken by English merchants out of the need to secure a steady supply of this commodity at low cost for the lucrative export market in Europe and at home. In fact, one may reasonably doubt whether tea would have been cultivated in India at all had not the Charter of 1833 ended the East India Company's monopoly of China tea trade. As D. H. Buchanan has remarked :

"But the removal of the Company's monopoly of China tea trade in 1833 quickened their perceptions to the advantages likely to accrue to India by the establishment of a new industry and in 1834 the Court sanctioned the appointment of a Committee to consider and submit plans for the introduction of tea culture in India".¹⁵

Hence, investment in colonies by the merchants of the mother country, although physically and geographically regarded as 'foreign investments', from the point of view of the ultimate beneficiaries

these are really 'domestic investments'. This was clearly stated by Mill in the following words :

"The West Indies....are the place where England finds it convenient to carry on the production of sugar, coffee, and a few other commodities. All the capital employed is English capital; almost all the industry is carried on for English uses.... The trade with the West Indies is therefore, hardly to be considered as external trade, but more resembles the traffic between town and country and is amenable to the principles of home trade" 16.

The profits from the foreign owned plantations in the colonies were mostly distributed among the overseas shareholders through high dividends and were not reinvested in the industry for expansion and development purposes. Again, when reinvestment of surplus did occur it did not benefit the country where it was generated. The surplus was reinvested in any other country where the firms owned plantations or at home based in the metropolis. In other words, the surplus generated in the plantations only benefited the mother country and no benefit filtered down to the hinterlands of these lucrative plantations. The whole process of syphoning off profits by the foreign owners of the tea plantations in India has been well summed up by a dissenting member of the Plantation Inquiry Committee as follows :

"The plantation has been developed as a colonial economy. The high cost structure of a costly managerial staff, high profits, high dividends, high commission to managing agents and low reserve is inseparable from it. The high brokerage charges, high cost of supplies, insurance and freights were all the incidence of this economy. The structure can be maintained only with state aid in several ways as was done by the former administration such as grant of enormous surplus lands, collection of an insignificant tax and low wages

IV Plantations and the Development of Jalpaiguri District

There are two conflicting views on the subject. The first view, popular in this area among a section of the middle class and also among many common people, was expressed in the following words by a distinguished tea planter of Jalpaiguri :

"The common people of Jalpaiguri derived some income from the tea companies and tea estates either as shareholders or suppliers, contractors etc. The industry employed many educated persons and a host of labourers. All this resulted in the general prosperity of the people. So the cost of living in this district was

much higher than that in many other districts of Bengal. As for cultural development, the numerous schools including the defunct Jackson Medical School, Colleges of various descriptions, which grew up in this town and district had the primary funds collected by the tea industry... The opera houses, play grounds, clubs, libraries drew their sustenance from the funds of tea industry. Medical, literary, political, musical and other cultural conferences held in this district, were mainly patronized by the tea industry. In fact, true urbanization with all facilities in the town and subdivision were mainly the product of money and men of tea industry".¹⁸.

The second view on the impact of tea plantations on the economy of the district has been expressed by an official publication of 1979. Says the publication :

"It may appear that tea is an important industry which contributes substantially to betterment of economic life of this district and that in forest there is a vast exploitable resource which can be expected to contribute towards the general development of this district. Unfortunately, these two sizeable income and wealth generating sectors remain almost as enclaves and do not have either interdependence or complementarity with the agricultural or agro-industrial sector which is the primary field of economic activity of the major part of the population. It can, therefore, be possibly stated without much error that economic life in the district depends on agriculture which is its primary and sole source of activity".¹⁹

Apart from making the obvious mistake of measuring the general prosperity of the district by the high cost of living, the first view on the matter has conveniently equated the 'people' with a minority of town-dwellers who certainly benefited from direct or indirect connections with the industry. It is true that educational, literary or cultural activities in the urban areas of the district received patronage from the tea planters but the poor and illiterate coolies employed in large numbers in the plantations or the small peasants or *adhiars*, equally poor and illiterate, living on the fringes of the tea estates, failed to derive any benefit from such patronage. On the other hand, if evidence of facts is to be believed, the second view seems to be nearer to reality. In what follows we would try to present the evidence.

The same official publication further says, 'Existing agricultural practices born of years are mostly traditional, and agriculture in this

district is strikingly characterized by low cost, low efforts, low return and low economy.²⁰ J. A. Milligan, the settlement officer of Jalpai-guri district wrote the following about the state of agricultural activities in this district in his Final Report published in 1919 :

"The backwardness of agriculture throughout the district is remarkable, the more so as the climate is so favourable. Not only in the variety and in some cases the quality of the crops grown exceedingly meagre, but the implements of agriculture are absolutely primitive and agricultural livestock are of the poorest quality. No attempt is made to exploit the possibilities which the soil and climate hold out, but the cultivators go on doggedly growing rice and jute, rice and jute and again rice and jute".²¹

The remarkable continuity in agricultural backwardness of the district observed here is a characteristic feature of pre-capitalist social formations. It clearly shows that extension of colonial rule or investment by merchant capital in plantations in a backward subsistence economy tend to perpetuate its underdevelopment. Although the colonial state was itself the zaminder of the western Duars there had been no effort on its part to improve productivity in agriculture through any extension activity, however primitive. We propose to study this in a separate paper. Suffice it will to say here that the most important reason for non-action of the colonial state in this field was that the backwardness of agriculture in the area served the economic interest of the planters by keeping incomes and wages low in the subsistence sector. Low wages in the subsistence sector helped the planters to keep wages down in the plantations. As Arthur Lewis has observed :

"The fact that wage level in the capitalist sector depends upon earnings in the subsistence sector is sometimes of immense political importance, since its effect is that *capitalists have a direct interest in holding down the productivity of the subsistence workers*. Thus, the owners of plantations have no interest in seeing knowledge of new techniques or new seeds conveyed to the peasants and if they are influential in the government, they will not be found using their influence to expand the facilities for agricultural extension. They will not support proposals for land settlement, and are often instead to be found turning the peasants off their lands. This is one of the worst features of imperialism for instance".²²

As regards growth of industries in the district from what might be regarded as a spill-over effect of the plantations, a look at the Census figures of 1921 relating to the industrial establishments here clearly

shows that insignificant industrial growth had taken place in this area where a thriving plantation industry had been in existence for almost fifty years.

In that year 142 tea estates engaged a total number of 100,350 unskilled workers aged 14 years and above and 20,518 workers of the same category aged below 14 years. The other types of workers employed by the plantations included 101 European and 42 Indian managers, 540 supervisory and technical staff of whom 216 were Europeans and Anglo-Indians and 516 Indian clerks. The total number of skilled workmen engaged by the plantations were 1,151 of whom only 5 were women. The figures relating to other industrial establishments are reproduced in Table 2.

The figures in Table 2, show that once tea plantations are excluded, the other industries (including a single railway workshop) employed only a total number of 520 skilled workers of whom 36 were women. Adding to this figure the 1,151 skilled workers engaged by the tea plantations we get a total number of 1,687 skilled workers engaged in industrial occupations in the district. Also noticeable in the above statistics is the insignificant proportion of skilled workers and managerial and supervisory personnel in the total work force of the tea plantations. The predominantly rural character of the district is underlined by the fact that only 315 unskilled workers including 85 women were employed in non-farm jobs outside plantations. This near-absence of non-plantation industries in this area is to be considered along with the facts that the decade 1911-21 was one of the three periods when Jalpaiguri experienced the highest rate of decennial growth in population and that the growth of employment in the plantations was already slowing down. This means that the additional number of job seekers had no other alternative but to try to extract a living directly from land—a situation definitely promoting ruralism.

Data regarding the occupational structure of the workers in the district presented in the Census reports of 1961 and 1971 show little change in the above picture of ruralism in the district. The data are reproduced in Table 3.

Apart from the very small percentage of workers engaged in the secondary sector and a comparatively large proportion dependent on the services for a living as seen in the above table, one should particularly note the substantial increase in the number of agricultural workers in this district, hitherto predominantly one of small peasants, between the two Census periods. The 1961 Census

reported 43.50% of the working population as cultivators while in 1971 Census the ratio of cultivators to total working population went down to 39.78. Understandably, the number of agricultural workers in the total working population has increased over the decade. The percentage share of agricultural workers in the total working population has increased by more than 8 percentage points from 3.17 in 1961 to 11.19 in 1971. This is a disturbing trend, having its origin in the dispossession of land of the small peasants under economic distress. The tea plantations would not absorb this surplus rural population. Employment in the tea plantations has been stagnating since long and the growth of non-farm jobs is negligible.

The District Census Handbook of 1961 says:

...all other spheres of activity, except plantation, Jalpaiguri's participation is in much lower proportion than that of the State. Industries do not have any significant role in the economic life of Jalpaiguri district as is seen in many districts of lower Bengal. ...Every 11 workers per thousand are absorbed in household industries against the State's participation of 42 workers per thousand. ...In Jalpaiguri police station only 2.02% of its working population are engaged in household industries. ...In the police stations of Alipurduar, Maynaguri and Rajgunge, 3.61%, 2.30% and 1.55% of the workers respectively are absorbed in manufacturing industries. In all other police stations less than 1% of the workers are engaged in manufacturing industries.

From the above brief analysis of the state of agricultural and industrial underdevelopment in the plantation dominated economy of Jalpaiguri district one thing clearly emerges, viz, the plantations did not stimulate in any way the development of agriculture.

V **Plantation Enclaves not Integrated into Local Economy**

But the plantations could contribute, at least indirectly, to the growth of the hinterland area. The chief economic advantage of the plantation industry lies in its ability to secure a high return by employing a large number of unskilled labourers. The only skill that is required of the plantation worker is the ability to obey orders. Had wages of plantation workers been higher than the requirements of a narrowly defined subsistence minimum, production in local agriculture and small-scale manufacturing sector dominated by potters, weavers, blacksmiths, cobblers etc. would certainly have been stimulated by an increased demand for food and simple manufactures from the workers. In this way the tea-plantations here could indirectly pass a part of their output to the population in the

hinterland and thereby increase their income. But, as will be shown below, due to their low income and consequent low standard of living, agriculture and local manufacture in the area did not receive the necessary demand-pull for development from the tea garden workers.

The wages of tea garden workers were initially low and continue to remain so. Although the planters of this district claimed that wages in Duars were higher than in Assam, it is difficult to verify the claim due to lack of data. The Royal Commission of Labour observed, 'No official statistics of average earnings are available, but we were informed by the representatives, of the Dooars Planters' Association that the average monthly earnings in 1929 were Rs. 14-4-1 for men, Rs. 10-5-8 for women and Rs. 2-14-5 for children.'²³ The representatives of the Duars Planters' Association, an organization of European tea planters and the Indian Tea Planters' Association representing the Indian tea producers admitted to the Commission 'that there was an understanding among their members not to raise the rates of wages.'²⁴ That wages in tea plantations were not higher than local agricultural wage rates is corroborated by the following piece of evidence tendered by the Industries and Labour Department of the Government of India before the Imperial Economic Committee: 'Tea offering as it does a low cash wage *no larger than that offered locally to the agricultural labourer*, is forced to depend in seasons of famine and scarcity for the replenishment of the labour force.'²⁵

Commenting on the low wages in tea plantations Professor Gadgil said :

'The evil effects of the rise in prices without a compensating rise in wages were felt by the labouring classes throughout India; the conditions on the tea plantations were, however, exceptionally bad... The Committee which inquired into Assam labour conditions in 1922 found that on some gardens the wage had been unchanged for almost a quarter of a century. Even the planters themselves had come to recognize by 1918 that a rise was imperatively necessary and yet it was not granted till after 1920. The price of cloth and food grains had made the position of the labourer precarious.... The result of this was a distinct lowering of the already very low standard of living of plantation labour... The inducement for labour to emigrate could only be a higher wage and yet *such was the tea-garden wage in 1921-22 that many garden coolies who*

left the plantations, being dissatisfied with the conditions therein, were easily absorbed in their home districts on a higher wage".²⁶

The high-salaried managerial staff in the plantations were mostly Englishmen accustomed to a high standard of living. But their number was very small and most of their consumption spending were on accustomed articles supplied from their home. They also made high savings out of their high salaries. In fact, one of the principal attractions of their jobs was the possibility of making high savings in a relatively short time. But such savings were sent out of the country or taken home when their owners left their jobs. Hence, neither the high consumption expenditures nor the high savings of the managerial class meant anything to the hinterland.

Lastly, if the foreign owners of the tea plantations were withdrawing the surplus from the area where it was generated for the purpose of investment in their home, the Indian owners of the Duars tea plantations, mostly from Jalpaiguri town, did not behave any differently in this matter. The latter also did not show much interest in the reinvestment of the surplus generated in the tea plantations either for the expansion or development of the industry itself or for setting up other industries in the hinterland area. If the rates of dividend were lower in the Indian tea companies the divisible pool of surplus was also smaller. Surplus from the plantations owned by Indians were also regularly withdrawn. It went into land, trading, speculation, real estate in the metropolitan city of Calcutta or simply financed luxury consumption, perhaps some charities. Hence, in the matter of capital transfer to the non-agricultural sector of the plantation economy the foreign and Indian planters behaved similarly, albeit for different reasons.

Table 4 shows the level of wages in the tea plantations in the Western Duars as obtaining in 1971. The wages are low both absolutely and in comparison with those in jute and cotton-textile, two other old industries in India. Even if we take note of fact that workers here are provided with cereals at subsidized rates, the low daily wage rates certainly point to the very low standard of living among them. Monthly wage rates in jute rose from Rs. 184.60 in 1970 to Rs. 235 in 1972, those in cotton textiles rose to Rs. 200 in 1972 from Rs. 162.50 in 1970. The rise in the daily wage rates of tea plantation labourers between 1970 and 1972 was a few paise only despite an appreciable increase in labour productivity.

It is apparent from the above that the circuit of low wage-low

demand-low standard of living in which the tea plantation workers were trapped by the colonial merchants more than a hundred years ago has not been broken since. Hence, the areas in the immediate neighbourhood of tea plantations in this district have not shown any sign of development under the impact of the demand-pull coming from the plantation work force. Data presented in Table 5 on the socio-economic condition of the hinterland of the tea estates unmistakably reveal the underdevelopment bias of tea plantations.

VI Urbanization in a Plantation Dominated Economy

It follows logically from the above sketch of the state of underdevelopment in Jalpaiguri district that urbanization, the end product of industrialization and economic development, will necessarily be slow in this area. According to 1971 Census, only 9.26% of the total population of the North Bengal region comprising the districts of Darjeeling, Jalpaiguri, Cooch Behar, Malda and West Dinajpur was urban. The insignificant rate of growth in urban population in each of these five districts since 1901 as revealed by the Census figures presented in Table 6 clearly show that the population in these districts have remained submerged in poverty, illiteracy and ruralism since the birth of these districts in the colonial days and nothing so far has happened in the agricultural, commercial or industrial life of this region, the Indian Constitution and the Five year Plans notwithstanding, that could make a dent on this underdevelopment equilibrium.

Returning to our chosen area of study, we find that in the district of Jalpaiguri there are two old towns, Jalpaiguri, the district headquarters, and Alipurduar, the headquarters of the subdivision of the same name. While Jalpaiguri has been in existence since 1901, the subdivisional headquarters of Alipurduar acquired the status of a class III town as late as in 1951. In 1901 Jalpaiguri had the status of a class V town according to the classification of towns made in the 1961 Census. Though situated in an area dominated by tea plantations embodying large investments of capital, neither of these towns was the product of spontaneous growth resulting from development of commerce or industry. Both were set up by the colonial government as seats of administration. The early settlers in these two places were all immigrants from the districts of Dacca, Faridpur, Mymensingh, of East Bengal and Rangpur, Pabna and Jessore. Most of these early settlers were lower-middle class people with education and virtually no capital, who were in search of

a living in clerical jobs in the newly established government departments, law courts and also the tea estates. There were many professional people, mostly lawyers, among them too. The promise of a good legal practice in a newly settled tract with large tea plantations in it attracted them. Of course, such added attractions as cheap living and the possibility of securing large leases of fertile land just for the asking—a petition with 8 annas worth judicial stamp affixed to it was enough to secure a grant of lease—were always there. These early settlers were closely followed by petty traders, school masters, doctors and of course, the ubiquitous Marwari moneylenders and traders dealing in cheap, machine-made goods imported from England. Gradually, other fortune seekers of all descriptions, brokers in tea-shares, speculators, contractors etc. came to settle in the towns. Almost all the early settlers of the towns of Jalpaiguri and Alipurduar acquired large 'Jotes' in the fertile western Duars.

Jalpaiguri town, the administrative headquarters of the new district born in 1869, is located on the western bank of the river Tista. Set up for administering the recently annexed western Duars the town had for its protection the 73rd Infantry and the 11th Cavalry stationed in it. The communication of the town with the rest of world was very poor. The communication link between the district headquarters and the western Duars was through Bernice Junction (Bern's ?) located on the eastern bank of Tista. The largest bazar of western Duars was located behind the railway junction, and has since been swallowed up by Tista. Duars was opened up to the rest of the world when the Bengal-Duars Railway came up between 1893 and 1901 linking Lalmonirhat in Rangpur district (Bangladesh), with Madarihat in the Duars. The town had its municipality in 1885. Primarily due to the lower middle class background of the early settlers who depended for a living on their ability to secure minor clerical jobs in government departments and commercial establishments, attempts to create facilities for English education within the town started early. A government secondary school for boys was established in 1876 and some public spirited townsmen of Jalpaiguri started making serious efforts to establish more schools in the town right from 1880. All such efforts received patronage from the local tea planters a number among whom were Muslims, and also from the zaminder of Baikunthapur estate. In course of time, the town came to have a well-developed school education system for both boys and girls. The first college was established in the town in 1942

and the women's college in 1950. Between 1930 and 1950 the town could boast of a Medical School turning out diploma holders in medicine and surgery. An Engineering College and a polytechnic institute are also located in the town. Development of higher education in the town was appropriately followed by the growth of public libraries and other cultural, literary and social activities like the founding of dramatic clubs, sporting clubs and the publication of local newspapers, mostly weeklies. One can say that Jalpaiguri town has developed well as a cultural centre of educated middle class.

But educational and cultural development alone do not make an urban centre grow. As we have noted earlier, the growth of an urban centre depends upon its ability to produce more and more goods and services which can be marketed to the rural areas in return for the products of the land. According to 1971 Census, the three most important products manufactured in Jalpaiguri were aluminium products, wooden furniture and bidi. The three most important products manufactured in Alipurduar, were soap, cane baskets and sweet meats. Manufacture of all these articles have poor income and employment generating capacity. These are organized on a small scale with small initial investment. The district has failed to attract people to them from the rural areas because of low growth of production, which has restricted their growth. The towns in this district having no economic opportunity to offer to the rural people do not exert any pull effect on them causing migration. Whatever commercial and other activities that have been later added to these towns of 'subaltern administrators' have not been enough to change their basic character as service towns.

That growth rate of population in service towns is rather low, is verified by the following figures relating to population growth in Jalpaiguri and Alipurduar presented in Table 7.

The table shows that Jalpaiguri experienced the highest rate of decennial population increase between 1941-51. But this was accounted for by the large-scale exodus of people from the erstwhile East Pakistan to the Indian Union. This sudden increase in population in Jalpaiguri had nothing to do with its attraction as a city. This is clear by the sharp fall in the growth rate of population in the next Census decade. The slow growth of the town is also verified by the change in its urban status from 1901 to 1971. In 1901 Jalpaiguri was a Class V town from which position it moved up to the status of a Class IV town in 1911. It remained pegged to that status

during the next two decades. In 1941 Jalpaiguri again moved one step up and gained the status of a Class III town, retaining this status till 1961. In 1971 Jalpaiguri was classed as a Class II town. Alipurduar emerged as a Class III town only in 1951 and has not since improved its urban status.

The 1961 District Census Handbook has observed, 'Both the two old towns—Jalpaiguri and Alipurduar have not grown—keeping pace with the general rate of growth observed for the district as a whole.' Jalpaiguri has shown the lowest population growth rate in its history in the 1961-71 decade. The Handbook further comments.

"In spite of a significant population growth in the urban sector of the district Jalpaiguri's urban-rural population ratio shows a very low figure in comparison to other areas of the state. While every fourth man is a town dweller in the State of West Bengal, in Jalpaiguri it seems that every tenth man seems to have been living in a town. Among all the districts in the State, Malda's population show the least tendency to desert the villages for towns. In Jalpaiguri also it appears that the people in general, have lesser predilection for town life." (p. 39)

It is plain from above that neither Jalpaiguri, nor Alipurduar, the two old towns of the district has ever received the benefit of any trigger action from the tea plantations in the shape of the investment in industry or agricultural modernization that might have accelerated their urban growth. One important reason why the towns in this district failed to receive any large-scale investment from the Bengali planters of Jalpaiguri is the magnetic pull of the colonial metropolis of Calcutta. Calcutta grew large in relation to foreign commerce and at the expense of inland cities and towns thereby crippling their urban growth. The surplus earned in tea in this area was mostly reinvested in trade, commerce or real estate in the city. Such wholesale withdrawal of surplus from the area where it is generated is bound to paralyse its growth. As has been said:

"The primate or great city may have a paralytic effect on the development of other urban places and tend to be paralytic in relation to the national economy. The fact that the great cities already exist creates the tendency to further centralize industrial, commercial and service development in them. Such a tendency may detract from the growth potential of other cities and may promote further concentration in the great city at the expense of the rest of the national economy".²⁷

VII Rural Urban Relationship in a Dualistic Economy

Much has been made of the courage and enterprise of the pioneer planters—both English and Indian—who opened up the 'howling wilderness' of the western Duars infested with deadly diseases to the rest of the world. But the important question about the role of plantations is not merely to what extent these brought 'backward and isolated areas into modern world economy' but 'whether the system makes it possible for these economies to achieve structural transformation and a self-sustaining pattern of growth and development.'²⁸ We have seen above that nothing of the sort has been achieved. On the other hand, the tea plantation has created a dualism in the economy of this district where a capitalistic nucleus exists in a state of 'peaceful co-existence' with an archaic structure. The capitalistic nucleus has failed to modify the pre-existing structural conditions. This has resulted in an 'enclaved industrialization' typical of many ex-colonies. This has been so because 'the capitalistic enterprise penetrating into a previously inhabited region with an archaic economic structure does not become dynamically linked with the latter, for the mass of profit it generates does not become integrated into the local economy.'²⁹ Thus a threshold of two different levels of productivity, that has not been broken since, separates the subsistence economy of this district from the prosperous plantation enclaves. The link between the two segments continues to be tenuous. With little spillover effect on the hinterland the large investments once made in the plantations have failed to stimulate agricultural modernization, industrialization and urbanization in this area. Due to the failure of the urban centres to produce more and more goods that can be exchanged for the products of land and to attract rural people to the town by creating economic opportunities resulting from industrial development, the points of contact between the rural and urban inhabitants in this district are few. Hence, the changes wrought in rural areas by advancing urbanism have been negligible.

The educational and cultural development in the two old towns and in the urban area as a whole has not gone anywhere near achieving the goal of education filtering down to the masses in the rural areas. Despite the high rates of literacy among the residents of the two old towns, 61.24 for Jalpaiguri and 57.68 for Alipurduar according to 1971 census, 80% of the people in the rural areas of the district was reported illiterate in that year. Despite the government

order for opening primary schools in the tea estates (Order No. 733 dated March 22) in 1976 the progress of primary education among the plantation workers had been extremely tardy. By 1934 there were only 106 such schools with a total number of 1,875 pupils. Although the number of primary schools has increased in the plantation areas since then their role in spreading literacy among tea workers has not been satisfactory. A look at the 1971 Census figures relating to the literacy rates among the population of seven police stations of the district having the largest number of tea estates, presented in Table 5 will confirm the statement.

This lack of education among the masses coupled with universal poverty clearly show that urbanism as a way of life has remained confined in this district within the municipal limits of the two old towns and the plantation enclaves. These places are regarded by most of the rural masses at best as seats of wealth and power where they come to buy and to sell.

Hence most of the Jalpaiguri district with its poor and illiterate small peasants and *adhiars* and the 'hapless coolie labour force which achieves all the agonies attendant upon industrialization without achieving its cultural, social and psychological fruit',³⁰ continues to languish in its rural isolation.

Table 1
Ownership Pattern of Tea Companies in Jalpaiguri
District as on 31.3.33

| Type of ownership | Area under tea (hectares) as on 31.3.33 | Percentage of total area under tea |
|----------------------------------|---|--|
| A. Public Ltd. Co. | | |
| (i) Sterling | 26,198.67 | 44.77 |
| (ii) European Rupee | 17,336.87 | 29.63 |
| (iii) Indian Rupee | 11,308.69 | 19.32 |
| B. Private Ltd. Cos. | | |
| (i) European | 1,016.09 | 1.74 |
| (ii) Indian | 583.36 | 0.99 |
| C. Proprietorship Estates | | |
| (i) European | 1,005.49 | 1.72 |
| (ii) Indians | 1,069.97 | 1.83 |

Source : S. Mukherjee, "*Emergence of Bengali Entrepreneurship in Tea Plantations of Jalpaiguri District*" (1879-1933), unpublished Ph.D. dissertation, University of North Bengal, 1978.

Table 2

Industrial Establishments (Other than plantations) in Jalpaiguri District in 1921

| Description of Establishment | No. of establishments | Total of persons employed | | Manager | | Supervisory and technical staff | | Clerical staff | | Skilled workmen (Indians) | | Unskilled* workmen (Indians) | |
|--|-----------------------|---------------------------|--------|------------------------------|----------|---------------------------------|----------|------------------------------|----------|---------------------------|--------|------------------------------|--------|
| | | Male | Female | Euro-peans and Anglo-Indians | Indi-ans | Euro-peans and Anglo-Indians | Indi-ans | Euro-peans and Anglo-Indians | Indi-ans | Male | Female | Male | Female |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
| Jute presses | 3 | 103 | 8 | 1 | 2 | 1 | .. | .. | 9 | 74 | 8 | .. | .. |
| Tea-chest and three-ply wood factories | 1 | 259 | 69 | 1 | .. | 9 | 1 | .. | 19 | 84 | .. | 137 | 66 |
| Lead rolling mills | 1 | 44 | .. | 1 | .. | 2 | .. | .. | 2 | 1 | .. | 38 | .. |
| Brick, tile and fire-brick factories | 6 | 344 | 58 | .. | 6 | .. | 7 | .. | 11 | 210 | 28 | 98 | 19 |
| Railway workshop | 1 | 175 | .. | 1 | .. | .. | .. | .. | 3 | 118 | .. | 53 | .. |
| Printing presses | 2 | 40 | .. | .. | 2 | .. | 16 | .. | 1 | 13 | .. | 4 | .. |

*Figures refer to workers aged over 14 years. Brick and tile factories engaged 23 workmen below 14 years of whom 11 were females. Printing presses engaged 4 workmen below 14 years.

Source : *Bengal District Gazetteer, B Volume, Jalpaiguri District, Calcutta, 1923, Table XXX*

Table 3
Percentage of Total Workers Engaged in Different
Occupations in Jalpaiguri District (1961-71)

| | Primary Sector (Including plantation) | | Secondary Sector | | Tertiary Sector | |
|----------------|---|-------|---------------------|-------|-----------------|-------|
| | (1) | | (2) | | (3) | |
| | 1961 | 1971 | 1961 | 1971 | 1961 | 1971 |
| Jalpai guri | 80.32 | 78.15 | 3.55 | 5.00 | 17.00 | 16.85 |
| West Bengal | 58.80 | 62.30 | 16.90 | 15.07 | 24.30 | 22.63 |

Table 4
Wage-Structure in Duars Tea Plantations (1971-79)

| Year | Size of plantations | Daily Wage (Rs.) | | |
|-------|--------------------------------------|------------------|-------|----------|
| | | Men | Women | Children |
| (1) | (2) | (3) | (4) | (5) |
| 1971 | For gardens of 500 acres and more | 2.77 | 2.60 | 1.46 |
| | For gardens below 500 acres | 2.74 | 2.57 | 1.46 |
| 1973 | — | 3.00 | 2.83 | — |
| 1977 | — | 4.30 | 4.13 | — |
| 1979* | — | 5.20 | 5.03 | — |

*The wages agreement expired on June 30, 1982.

Source : Sharit Bhowmik, "Wages of Tea Garden workers in West Bengal", *Economic and Political Weekly*, October 2, 1982).

Table 5

Socio-Economic Situation in the Hinterland of Tea Plantations in Jalpaiguri District

| Name of the police Station | No. of tea-estates | Percentage of total working population engaged in tea plantations | | Percentage of total working population engaged in 5 categories of non-agricultural jobs | | Percentage of literates in the total population | |
|--------------------------------------|--------------------|---|-------|---|-------|---|-------|
| (1) | (2) | 1961 | 1971 | 1961 | 1971 | 1961 | 1971 |
| <i>Jalpaiguri Sadar Sub-division</i> | | | | | | | |
| 1. Mal | 29 | 54.78 | 42.73 | 10.25 | 11.59 | 17.00 | 19.00 |
| 2. Mitiali | 17 | 73.00 | 70.45 | 5.28 | 9.00 | 14.37 | 17.37 |
| 3. Dhupguri | 22 | 43.26 | 33.71 | 7.24 | 10.17 | 15.43 | 19.27 |
| 4. Nagrakata | 16 | 63.12 | 63.83 | 5.00 | 5.65 | 14.72 | 14.37 |
| <i>Alipurdwar Sub-division</i> | | | | | | | |
| 5. Kumargram | 10 | 32.71 | 37.90 | 6.16 | 9.35 | 16.48 | 20.80 |
| 6. Kalchini | 24 | 64.77 | 62.00 | 7.31 | 9.62 | 15.25 | 12.27 |
| 7. Madarihat | 18 | 59.00 | 39.28 | 7.00 | 5.64 | 14.62 | 17.00 |

Manufacturing, processing, servicing and repair, construction, trade and commerce, transport, storage etc., other services.

Source : District Census Hand Book, Jalpaiguri, 1961; 1971.

Table 6

District-wise percentage of urban population to total population between 1901-1971 in North Bengal

| District | 1901 | 1911 | 1921 | 1931 | 1941 | 1951 | 1961 | 1971 |
|---------------|------|------|------|-------|-------|-------|-------|-------|
| Darjeeling | 8.04 | 8.78 | 9.82 | 13.09 | 14.87 | 20.55 | 23.16 | 23.05 |
| Jalpaiguri | 1.77 | 1.72 | 2.08 | 2.55 | 3.27 | 7.21 | 9.11 | 9.60 |
| Cooch Behar | 2.48 | 2.67 | 3.09 | 3.06 | 4.19 | 7.50 | 7.01 | 6.84 |
| West Dinajpur | 0.00 | 0.00 | 0.00 | 0.00 | 0.83 | 4.29 | 7.48 | 9.37 |
| Malda | 2.88 | 2.58 | 2.51 | 2.73 | 2.21 | 3.75 | 4.15 | 4.21 |

Source : Census of India, 1961 and 1971 Vol. XVI, Part IIA, General Population Tables.

Table 7

Population Change in Jalpaiguri and Alipurduar Since 1901

| Name of the Town | Civic status | Year | Persons | Decade variation | Percentage |
|------------------|--------------|------|---------|------------------|------------|
| (1) | (2) | (3) | (4) | (5) | (6) |
| Jalpaiguri | Municipality | 1901 | 9,708 | | |
| | | 1911 | 11,469 | + 1,751 | +18.14 |
| | | 1921 | 14,520 | + 3,051 | +26.60 |
| | | 1931 | 18,962 | + 4,442 | +30.59 |
| | | 1941 | 27,766 | + 8,804 | +46.60 |
| | | 1951 | 41,259 | +13,493 | +48.60 |
| | | 1961 | 48,748 | + 7,479 | +18.13 |
| | | 1971 | 55,169 | + 6,421 | +13.17 |
| Alipurduar | Do | 1951 | 24,886 | | |
| | | 1961 | 28,927 | + 4,041 | +16.24 |
| | | 1971 | 36,667 | + 7,740 | +26.80 |

Source : Census Reports of the respective years.

- 1 United Nations Economic Commission for Asia and the Far East (ECAFE), Document E/CW. 11/URE. 2, 28 June, 1956, p. 4., Quoted in Nels Anderson, *The Urban Community : A World Perspective*, London, 1960, p. 4.
- 2 *Encyclopaedia of the Social Sciences*, 'Urbanization', Vol. XV, p. 189.
- 3 For the first time in 1951 the Census Statistics were presented separately for rural and urban areas. The urban area for the purpose of Census of 1961 includes, (a) all municipal towns, cantonment and any other area being administered by local bodies such as, town Committee etc. (b) Any other place which satisfy the following empirical tests viz., (i) a population of not less than 5,000 persons, (ii) the density of at least of 1,000 persons per square mile, (iii) three-fourth of the occupations of the working population should be outside of agriculture, (iv) the place should have few pronounced urban characteristics and amenities like location of educational, medical and public institution, offices or trading centres in it. (*District Census Handbook*, Jalpaiguri, 1961 p. 39).
- 4 Nels Anderson, *op. cit.*, p. 9.
- 5 *Ibid.*, p. 10.
- 6 *Ibid.*, p. 81.
- 7 *Ibid.* p. 82.
- 8 Rai Bijoy Behari Mukherjee Bahadur, *Final Report of the Land Revenue Settlement Operations in the District of Jalpaiguri 1931-1935*, (Government of Bengal, Calcutta, 1939), p. 1
- 9 Quoted in Hamdi Bey, 'A Centenary Survey' in the *Centenary Souvenir of Dooars Branch of Indian Tea Association*, 1978, p. 62.
- 10 *Census of India 1911, Vol. V Bengal, Bihar and Orissa and Sikkim* Report by L.S.S. O'Macley (Bengal Secretariat Book Depot, Calcutta, 1913), pp. 99-100.
- 11 *Report of the Plantation Inquiry Commission*, 1956, Part I-Tea, (Government of India, New Delhi), 1956, p. 19, para. 3
- 12 *Ibid.*, p. 23, para. 14.
- 13 *Ibid.*, p. 24, para. 16.
- 14 Maurice Dobb, *Studies in the Development of Capitalism*, London, 1959, p. 372.
- 15 D. H. Buchanan, *The Development of Capitalistic Enterprise in India*, New Impression, (London, 1966) p. 54.

- 16 John Stuart Mill, *Principles of Political Economy*, (London, 1965), Bk. III, Ch. 35, p. 693.
- 17 *Report of the Plantation Inquiry Committee*, p. 353, para. 35.
- 18 B. C. Ghosh, 'The Development of the Tea Industry in the District of Jalpaiguri : 1869-1968' in *Jalpaiguri Jela, Sata Barshiki Smarark Grantha*, (Jalpaiguri District Centenary Volume) 1869-1968, (Jalpaiguri, 1970), p. 295.
- 19 *A Note on Agricultural Activities of Jalpaiguri District*, (District Agricultural Office, Jalpaiguri, Jalpaiguri, 1979), p. 3.
- 20 *Ibid*,
- 21 J. A. Milligan, *Final Report on the Survey and Settlement operations in the Jalpaiguri District 1906-1916*, (Calcutta, 1919), p. 21.
- 22 W. Arthur Lewis, 'Economic Development with unlimited Supplies of Labour' in A. N. Agarwala and S. P. Singh, *The Economics of Underdevelopment*, (New York, 1964), pp. 409-410.
- 23 *Report of the Royal Commission on Labour in India*, (Government of India, Calcutta, 1931), p. 399.
- 24 *Ibid*
- 25 Quoted in A. K. Bagchi, *Private Investment in India, 1900-1939* .(Cambridge, 1972), p. 138 n.
- 26 D. R. Gadgil, *The Industrial Evolution of India in Recent Times 1860-1939*, (Delhi, 1974, Fifth edition, third impression), pp. 316-317.
- 27 Unesco Research Centre, Calcutta, *Urbanization in Asia and the Far East*, 1957, p. 34.
- 28 G. L. Backford, 'The Economics of Agricultural Resource Use and Development in Plantation Economies' in Henry Bernstein (ed.) *Underdevelopment and Development : The Third World Today*, (Penguin Books), p. 116.
- 29 C. Furtado, 'Elements of a Theory of Underdevelopment', in *Bernstein*, op. cit. p. 35.
- 30 C. Geertz, 'Java and Japan Compared', in *Bernstein*, op. cit. p. 55.

URBAN GROWTH WITHOUT URBANIZATION : THE EXPERIENCE OF A BORDER DISTRICT OF WEST BENGAL†

Ratan Khasnabis
and
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Introduction

A high rate of urban¹ growth² does not necessarily imply a fast urbanization.³ This is particularly true when the urban centres experience a dwarfed economic growth arresting the effectiveness of the 'urban pull' factor of the population movement. The present study examines this hypothesis with reference to Nadia, a small but populous district⁴ of West Bengal situated in the eastern plains of the state, bordering Bangladesh.

A decaying district in the early part of this century in terms of growth of population, Nadia experienced a high influx of refugees following the partition of Bengal. As we shall show below, this exogeneous factor brought about a high rate of urban growth and a fast urbanization during the early years following partition. During the next two decades, the pace of urban growth remained moderately high, but this was not coupled with even a nominal rise in urbanization. Urban development, in the case of Nadia, thus became merely a demographic illusion.

This study attempts to explain this strange phenomenon in terms of the dwarfed growth of the urban economic activities. It has been observed that during the first two decades after independence, there

† This study is based on the Census data for first seven decades of this century. The paper does not cover 1981 Census because at the time of preparing the paper, such data were not available.

had been a relative decline of the 'services sector', the largest employment generating sector of urban Nadia, in terms of work-force absorption. By and large, this was not compensated by the growth of secondary activities. As a result, instead of migration from rural areas as a voluntary response to greater economic opportunities (the 'urban pull' factor), a 'push-back' of work force to primary sector (mainly as agricultural labourer) that arrests the pace of urbanization, is taking place in the district.⁵

Urban growth in Nadia before the partition of Bengal

During the first three decades of this century, the pace of urban growth was very poor in Nadia.⁶ As the Table 1 indicates, the urban population increased at an average rate of just 2.58% per decade during this period. This is quite low, particularly when one notes that the corresponding all India rate was 9.27% per decade. Considering the demographic performance of urban Nadia *vis-a-vis* that of its rural hinterland, the performance, however, does not seem to be as deplorable as a comparison with all India data indicates. Since the late 19th century, Nadia was a 'decaying district' in terms of demographic performance, according to various census reports. During the first three decades of this century, as Table 1 indicates, the decaying tendency was quite in existence—the district population during this period decreased at an average rate of 2.16% per decade, the rate of decrease in the rural areas being 2.72%. The decay of the river system, the growing poverty of the soil, bad health together with the prevalent tenure system of *utbandi* which introduced insecurity of tenure, were the reasons for the deplorable state of agriculture and the consequent large scale migration from rural areas. This largely explains the absolute decline of the population in the rural areas. The absolute decline is also explained by high death rates caused by the frequent outbreak of epidemics and near famine conditions in the rural areas.⁸ Be that as it may, in the background of absolute decline in population in the rural areas, the relative performance of the urban areas is not as deplorable as it seems to be. In fact, during the second and the third decades of this century, there was a rising trend of urbanization in the district as the Table 5 indicates.

The rate of urban growth during 1931-1941 was 35.43%, a high rate compared to the previous period. The growth rate was 13.83% in the rural areas and that of the district was 16.40%. All these rates are well above the rates attained during any of the first three decades of this century. While a part of such a rise was due to 'bogus inflation

in the 1941 census count' (Census, 1951 p. xiii), there are grounds to believe that the district experienced a moderate to high rate of repopulation. The census report cites immigration from other districts and states along with the improvement in the health situation of the district as a consequence of the implementation of several minor drainage schemes as the reasons for such a rise in the population.

The influx of refugees and the urban growth

The highest ever urban growth in the district was recorded during the next decade when, as a consequence of the partition of Bengal, there had been an influx of refugees from East Pakistan to Nadia. During 1946-51, according to the Census estimate, 426907 displaced persons migrated from East Pakistan to Nadia. This was about 37.29% of the total population of the District in 1951. According to one calculation, the net inflow to the district during 1941-51 had been about 344462 persons.⁹ This is about 30 per cent of the estimated population of the district in 1951.

It seems that the migration from East Pakistan had a tremendous impact on the demography of the district. The decennial growth rate for the district jumped to 36.25%, the rural population increased by 29.39% and the urban population scored a record rise of 78.96% after the partition of Bengal. Such a rise cannot be explained but by a large scale immigration during 1941-1951, more so when the cyclone of 1942 and the famine that caused the epidemic of 1943-1944 had considerably reduced the natural population during this period.

Since the census data do not provide us with the destination-wise break-up of the immigrants, it is difficult to estimate the impact of refugee immigration on the urban growth of Nadia on the basis of the census data. However, there are two official studies on the displaced persons that might be utilized for this purpose. The first is a report 'on the sample survey for estimating the socio-economic characteristics of displaced persons migrating from Eastern Pakistan to the State of West Bengal' (Government of West Bengal, 1951 a). The second is a study 'on the rehabilitation of Refugees' conducted by the State Statistical Bureau (Government of West Bengal, 1956). According to the first report, 403804 persons had in-migrated to the district between 1946 and 1951 of whom 67696 settled in the urban areas (Report 1951 a, p. 13). The second report records the number of immigrants during 1946-1955 as 466608, of these 95281 having settled in the urban areas (Report 1956, p. 90-91). On the basis of the

report 1951 a, the estimated urban growth due to refugee migration is 58.22%. The percentage becomes 81.93 (for a period of fifteen years—1941-1955) if we consider the number of immigrants on the basis of the second (1956) report (see Table 2). On the basis of these estimates, it is reasonable to conclude that the contribution of migration from East Pakistan to the urban growth of Nadia during this decade was quite high. On the basis of the census data and the Report 1951 a, one understands that the growth of urban population due to natural factors was 20.74%, while the contribution of migration being about three times higher.

The growth pattern at disaggregate level

The urban growth pattern in five important towns¹⁰ of the district has been presented in Table 3. All these towns, except Nabadwip, registered either depopulation or virtual stagnation in terms of urban growth during the first three decades of this century. The uninterrupted urban growth in Nabadwip is partly explained by the existence of a stable services sector associated with tourism on account of the continuing importance of the town as a Hindu pilgrimage centre. Another reason for such a stable urban growth was the agricultural prosperity of the adjacent rural areas of Burdwan with fertile land that induced double-cropping even in the early 20th century¹¹; this was a powerful factor which sustained the importance of the town as a trade centre. Such favourable factors were absent in the case of other towns. Trade and other tertiary activities associated with the primary sector could not flourish in any significant manner in these towns because of the poor state of agriculture in their respective rural hinterlands. Tourism and such other favourable factors were also absent in case of these towns.

For each of these towns, the highest rate of urban growth was recorded during 1941-1951. Among the urban centres, however, a considerable variation in the growth rates of population has also been observed. Thus, Krishnanagar and Santipur, the two traditionally populous towns of the district, experienced a moderate rise, while Chakdaha, a town with an average decennial rate of growth around 1.13%, recorded 179.80% rise in population during this period.

The contribution of the influx of refugees to such a sudden rise in the growth rate is considerably high, as the per cent increases in urban population due to immigration in 5 leading towns of the district, estimated on the basis of the Report (1956) as indicated by Table 4. One important finding of the table is that the urban growth

due to immigration in case of Chakdaha is abnormally high, so much so that the new Chakdaha can be considered to be a product of the partition of Bengal. For the other towns, as an explanatory factor for urban growth, the natural rise in population continues to be a powerful factor. The impact of immigration seems to be the lowest in Santipur, a very old municipal town in the western part of the district.

The pace of urbanization

Table 5 describes the pace of urbanization in the district during this century. In 1901, about 10% of the population of the district lived in the urban areas. Up to 1931, the per cent variation in the percentage of population in the urban areas was not high, as column 3 of the Table 5 indicates. However, the data do indicate a slow growth of urbanization during this period. The slowest rate of growth was recorded during the first decade of this century.

The urbanization assumed a faster pace during 1931-1941 and attained the peak during 1941-1951 when 18.18% of the population had been living in the urban areas. During this decade, there had been a 31.36% increase in the urban percentage of the population. With reference to 1931, the pace of urbanization was as high as 52.90%.

Migration from other districts to Nadia had always been a rare phenomenon. A rise in the percentage of urban population could, therefore, be explained in terms of a lower natural growth rate of the rural population and/or an intra-district migration from rural areas to urban centres. In fact, the growth of urbanization during the second and the third decade of this century when migration to Nadia had been a rare phenomenon,¹² is largely explained by these factors. One could argue that better living conditions in the urban areas induced a higher natural rise in population by reducing the death rate. On the other hand, frequent outbreak of epidemics in the rural areas, besides causing a higher death rate, induced migration to towns, because civic and health amenities had been better in the urban areas. Such factors might explain a relative decline in rural population, and a consequent rise of urbanization in the district.

But the sudden rise in the rate of urbanization during 1941-1951 was concomitant to an influx of refugees from outside the state. Even under the assumption of no intra-district migration and equality of growth proportions of natural population in urban and rural areas, a rise in the percentage of urban population is logically possible, if the refugees' migration to rural areas (M_1) as proportion

to the original population in the rural areas (R_1) is less than the migration of refugees to urban (M_2) areas as a proportion to the original population in the urban areas (U_1).

In case of Nadia, as the Table 2 indicates, M_1/R_1 was less than M_2/U_1 according to both of the alternative estimates. Thus, there are grounds to believe that the migration from East Pakistan would have accelerated the pace of urbanization even if the intra-district migration to urban areas and the tendency of higher net reproduction rate in the urban areas had been absent in the district.

The extent of urbanization due to refugee influx, when other factors favouring urbanization are also taken into consideration, is given by the proportion of immigrants to urban areas to the total population of the district. In 1951 this was between 5.61% and 8.32% which is quite high (between 32.50% and 45.76% of urban population), given that the percentage of total population in the urban areas, i.e. per cent urban due to all the contributory factors, was just 18.18 in that year.

As Table 5 indicates, there was a drastic fall in the tempo of urbanization during the next two decades. The percentage of total population in the urban areas stagnated around 18.50 during this period. As a result, between 1951 and 1961 there was just a 1.27% rise in the per cent urban population of the district; this is extremely poor compared to the corresponding rate attained in the previous decade. The pace of urbanization was only 1.79% during 1961-1971. Thus, there was hardly any growth of urbanization in the district during the two decades after the partition of Bengal.

A high rate of urban growth coupled with a virtual stagnation in urbanization, i.e. urban growth without urbanization has become the reality of present day Nadia.

The decay of the old towns

In terms of the pace of urbanization, the five leading towns of the district record a deplorable performance during the two decades following independence. It is true that in all these towns there was a moderate to high rate of urbanization during 1941-1951. But by 1961, all towns except Chakdaha recorded negative rates of growth of urbanization (Table 6, column 6). The deurbanization was strengthened further during the next decade when even Chakdaha reported a virtual stagnation—the growth rate in case of Chakdaha recorded a meagre 1.96% compared to 52.24% in the previous decade. An interesting feature of the decade is the reurbanization in Ranaghat where a 4.39% growth was recorded.

Assuming no variation in the intra-district natural growth rate of the population, Table 6 indicates that the traditional urban centres of the district have failed to attract people from the rural areas. In other words, the 'urban pull' factor has not been operative in the district. There has been a relative decay of the old towns, a high rate of urban growth notwithstanding.

II

Urban growth without urbanization may be due to a poor development of employment generating activities in urban areas compared to the rural hinterland, discouraging migration from rural areas. In this section, we examine this hypothesis in terms of the pace of work-force absorption in the urban sectors of the district during the two decades following 1951. We shall also consider the pace of work-force absorption during 1941-1951 in order to examine whether the 'urban pull' factor was responsible for large scale urbanization after the partition of Bengal.

The analysis will be based on the relevant census data for the period 1941 to 1971.

The problem of inter-census comparison

With the 1961 classification scheme of asserting workers into economically active and otherwise, the comparability with previous census data has become rather difficult. However, with regard to the present analysis which considers only the broad dimensions of the occupational structure, all such problems excepting that with the inter-census comparison of the female work-force could be avoided. The problem with the inter-census comparison of female work-force is difficult to resolve. As we know, there has been a considerable rise in the work-force participation rate for females in 1961 census compared to that in 1951, probably due to a significant variation in these two censuses in regard to the classification of unpaid family workers among the females. There is no suitable adjustment technique to take care of this problem. To be on the safe side, therefore, we found it advisable to drop it altogether from the purview of our discussion. The analysis that follows will, therefore, be based on the occupational pattern of the male work-force alone.

There are some problems with the 1941 census also. Based on a two per cent sample (called Y sample) of the original schedules, the distribution of the male work-force for Nadia in 1941, as given in Census, 1941, does not contain any direct information about 'services in urban area'.¹³ Since region-wise break up of such data which indicates the absorption of work-force in 'services' sector is

not available for the district, a direct computation is also not possible. However, in order to pursue the inter-census comparison we have taken 'public administration and liberal art' as a proxy to 'services in urban areas', because most such activities are expected to concentrate in the urban areas. This has been selected as the only proxy because no other comparable occupational category seemed to have such a distinct urban bias.

There was another problem as regards the census data of 1941. On the basis of the extent of information on the 'industry including house-hold', it is not possible to get the division of the data between household manufacture and other than household manufacture, a division followed in 1961 and 1971 census studies. Such a problem also remains in the case of the 1951 census. In order to get comparability, we lumped 'household industry' with 'nonhousehold manufacture' in case of 1961 and 1971 census studies and formed a group namely 'industry including household industry' so that the inter-census comparison should be performed.

The 1941 census contains a category of 'insufficiently described' male work-force. Since no comparable data are available in the subsequent census studies, we drop it from the purview of our discussion.

The trend and structure of the sectoral distribution of work-forces in Nadia (1941-1971)

Table 7 indicates that between 1961 and 1971, there has been a moderate increase in the percentage of male workers depending on agriculture; between 1941 and 1951, on the other hand, this percentage decreased significantly. Allied agricultural activities, e.g., involvement in fishing, plantation and orchard cultivation increased considerably between 1941 and 1961 as the percentage of male workers absorbed in the sector at various decennial points indicates. On the whole, the importance of agriculture and related activities seems to remain unchanged during the 30 years under consideration. Work-force absorption in industry including household industries increased slightly during 1941 and 1961, but the trend was reversed during 1961-1971. In other activities, except transport, no secular rise in the percentage of male work-force is indicated.

Considering all the non-agricultural activities excluding 'rural services' as urban activities¹⁴ we rearrange the data of Table 7 and construct Table 8 which gives the decennial description of the percentage of male work-force in the urban activities. As the table

suggests, 25.83% of the total male work-force was engaged in urban activities in 1941. The percentage increased to 28.84 in 1951, indicating an 11.85% increase in the percentage of male work-force in the urban activities.

This suggests that, compared to rural activities, the urban activities had better work-force absorption capacity during that period. A closer scrutiny of Table 7 suggests that 'urban services' and 'trade and commerce' might have contributed largely to such a relative rise in the capacity of work-force absorption in the urban sector. A drastic fall in the labour absorption in agriculture (largely due to migration of a large number of Muslim cultivators to East Pakistan without an immediate rehabilitation of immigrant Hindus in their lands) also contributed indirectly to such an urban tilt of the occupational pattern during this period.

However that may be, what follows from Table 8 is that during 1941-1951, urban activities had relatively higher potentiality of labour absorption so that it could attract or pull the population to the urban areas at a higher rate—a phenomenon which is adequately reflected in the pace of urbanization during this period.

The relative importance of the urban sector in terms of work-force absorption diminished during the next decade. The percentage of work-force in urban sector being 27.96 in 1961, one finds that compared to the position in 1951 there was a 3.22% decline in the percentage of work-force in urban sector; The decline was 5.51% during the next decade. Thus, between 1951 and 1971 the percentage of work-force in the urban activities declined by 8.56. This indicates that the urban activities lost the edge over rural activities during these two decades.

As a result, no 'urban pull' factor in terms of greater economic opportunities in the urban sector seems to have operated during this period. This might explain the virtual stagnation of urbanization during these twenty years.

Several factors including decline in the percentage of work-force engaged in urban services and trade and commerce and virtual stagnation in industry including household during 1961 and 1971 are responsible for the relative decline of work-force in urban sectors. The work-force tilted further towards agriculture. More exactly, there had been a steady rise in the percentage of work-force absorbed as agricultural labourers.

The dwarfed growth of urban sector

As we gather from Table 9, one feature of the urban development of Nadia is the excessive dependence of its urban work-force on tertiary activities like trade, commerce, transport and urban services. Thus, in 1951, 75.17% of the urban work force in Nadia depended on tertiary activities (Table 10a). The percentage declined during the next two decades, but even then, the quantitative importance of such activities is still very high as the census data of 1961 and 1971 indicate.

Cultivation and allied activities, an element that brings a rural tilt in urban employment structure, also retains its importance. During 1951, 6.84% of the work-force was engaged in such an activity. Though the percentage declined to 4.9 in 1961, again it shot up to 12.05% in 1971. The secular rise in the percentage of people engaged in agriculture as labourers is the most contributory factor for such a growing importance of agriculture in Nadia's urban areas. The percentage of agricultural labourers in the urban work-force recorded an 11.49% rise during 1951-1961. At 1971, agricultural labourers accounted for 6.50% of urban employment, thus denoting nearly a 300% rise during 1961-1971 (Table 10b).

The role of industry and other related sectors generating non-agricultural material production, the core of urban economic activity, is not very important in the district. As Table 9 indicates, employment in the secondary sector industry (including household, construction and extractive activities) did increase from 17.98% to 32.83% during 1951-1961. But the tempo could not be maintained in the subsequent decade when the percentage of absorption of work-force in such sectors declined to 32.33. The urban development of Nadia thus retained the character of tertiary (and agriculture) led development.

The inter census comparison of the distribution of work-force indicates (Table 10b) that during 1951-1961, there had been a noticeable shift of work-force towards industry largely (85.95%) at the cost of tertiary activities. But the picture had changed during the next decade when there had been the shift of work-force not only from tertiary but also from secondary activities; the shifted work-force being absorbed largely in the primary (agriculture) sector, mainly (67.83%) in the form of agricultural labourers.

The demographic findings reported in this section may be summed up in the following way. In terms of the absorption of work-forces, one finds that during 1951-1971 there was a decline in

the relative position of the urban sector *vis-à-vis* the rural sector. This indicates that at least there was no 'urban pull' in the population movement which could induce migration from rural areas as voluntary response to greater economic opportunities in the urban areas. The inter-census comparison of the data indicates that such a relative stagnation or decay of the urban sector is largely explained by a secular decline in the relative employment potentiality in the tertiary sector, the largest employment generating sector in urban Nadia. Considering the pattern of the sectoral distribution of work-forces within urban Nadia, one observes that the nature of inter-sector movement of work-forces was largely urban during 1951-1961 in the sense that the decline of percentage of work forces in tertiary activities in urban Nadia was largely counter-balanced by a rise in the percentage of work-forces in secondary activities. During 1961-1971, however, even this urban character of the inter-sector movement of work-forces within urban areas was disturbed. The percentage contribution declined in both services and secondary sectors, causing a push of population to agriculture, the rural activity, in the form of a conspicuous rise of the percentage of agricultural workers in urban areas. In a sense, this indicates that there has developed a 'push back' from urban sector in terms of the work-forces absorbtion. This discourages migration from rural areas and consequently the pace of urbanization in the district is arrested.

Towards a theory of dwarfed urbanization

Contemporary economic theory on rural urban migration is largely based on Lewis (1954) or Ranis and Fei (1961) type models of the reallocation of surplus rural labour through inter-sectoral population flows from agriculture or primary sector to industry; the wage differential depicting difference in marginal productivity is used as the key explanatory factor in such models. The apparently paradoxical situation of rising rural urban migration in the context of rising unemployment in the urban areas is also taken care of in Harris and Todaro (1970) which postulates that 'migration proceeds in response to urban rural difference in expected earnings with the urban unemployment rate acting as an equilibrating force on such migration.'¹⁵

One would like to submit a sceptic note on the question of the analytical sufficiency of such models in the context of the economics of rural urban migration and the pattern of urbanization in the Third World countries. A model on migration and urbanization with relative employment potentiality of the regions of emigration and

urban rural difference in the expected or actual earnings as key explanatory factors is sensible. As theory, however, this is superficial; it is just a formalization of the common sense logic that the prospect of better economic opportunity is the major cause of every rational migration. Indeed, what else could be the apparent reason? A good theory, however, should go beyond such naivety and address itself to more complex questions; it should examine the factors that give rise to such differential employment prospects and the impact of such factors in the pattern of migration.

Consider the case of Nadia, the focus of attention in the present study. As we find, the pace of urbanization in Nadia was poor, because the employment potentiality of urban Nadia had remained poor during the last two decades. This is quite a sensible observation and, had we tried, we could fit a model of standard stock on the data. But we doubt the analytical robustness of such models because they formalize only a near obvious fact that a large scale rural urban migration in the district had been discouraged due to the lack of a better economic prospect in urban Nadia. Is so much labour worthwhile simply for deriving such a superficial conclusion? What except the absence of better economic prospect be the immediate reason for the absence of large scale migration to urban Nadia? At the same time, how does such an observation help one grasp the real constraints of urban development in Nadia?

The last question becomes singularly important when one notes that there are indications in the census data that a meaningful study on the constraints of Nadia's urbanization is possible if, instead of concentrating on such a near obvious explanatory factor, viz., the employment opportunity in urban areas, one probes deeper into the problem and considers the structure of employment generating activities in urban Nadia and the factors that shape the trend of the dominant element or elements of the structure. Let us elucidate this point with the help of the data we have already presented.

Considering the structure of the employment generating activities in urban Nadia, it has been observed that the structure is heavily biased in favour of tertiary activities; evidence from various census data establish this point unequivocally. There is also evidence in support of the contention that the dominant element of the structure of employment generating activities, i.e., the tertiary sector, recorded a poor progress over time in terms of absorption of work force. Logically speaking, the dwarfed growth of tertiary activities could, therefore, be considered as an important causal factor behind

the poor expansion of urban employment in Nadia.

If we consider now the factors that shape the trend of the dominant element of the structure of urban employment, i.e., if we consider factors behind such a poor growth of tertiary activities, a meaningful explanation of dwarfed urbanization could be developed in the following way. The growth of tertiary activities being a function of the growth of productive activities in primary and secondary sectors, a town with excessive dependence on the tertiary activities for generation of employment makes its economy a mere adjunct to the metropolitan and the adjacent rural economies, which produce secondary and primary commodities, respectively. The independent growth potentiality being absent, the level of urban development of these urban centres is thus determined by factors which are exogeneous to these urban centres. With a poor growth of agriculture in the rural hinterlands and a stagnating industry in the nearby metropolis, the tertiary activities in these centres are bound to register a dwarfed growth and consequently the pace of urbanization is likely to remain poor. Our understanding is that a model developed on this line fits well to the empirical exercise that we have developed in this study. With a secularly declining percentage of the work-force in the manufacturing sector of Nadia, limits to Nadia's urbanization had been set by the poor expansion of the tertiary sector. The poor rate of expansion of tertiary sector is again explained by the poor pace of industrialization in Calcutta urban conglomerate¹⁶ and a not-so-good performance of Nadia's agriculture¹⁷

Nadia's experience lays bare the weakness of a 'tertiary-led' urban growth programme. It should be noted that the stagnation and the decay of the old towns and a poor pace of urbanization, as we find in case of Nadia, are not some exceptional observations. Also, the domination and the dwarfed growth of tertiary activities in urban centres are not unique to urban Nadia. With a poor pace of industrialization, and a perpetual backwardness in agriculture, such things are expected to occur in most of the semi-feudal and semi-colonial countries of the Third World. It is our understanding that Lewis (1954), Ranis-Fei (1961) or Harris-Todaro (1970) type models fail to capture the intricate economic rationale of such developments. Such phenomena should, therefore, receive more attention from the demographers and the economists.

Table 1
Percentage (Decade) Variation in Population : 1901-1971

| <i>Decade</i> | <i>Nadia Urban</i> | <i>Nadia Rural</i> | <i>Nadia District</i> |
|---------------|--------------------|--------------------|-----------------------|
| 1901-11 | 0.52 | 0.34 | 0.36 |
| 1911-21 | -0.29 | -9.20 | -8.28 |
| 1921-31 | 7.51 | 0.66 | 1.43 |
| 1931-41 | 35.43 | 13.83 | 16.40 |
| 1941-51 | 78.96 | 29.39 | 36.25 |
| 1951-61 | 51.53 | 49.21 | 49.64 |
| 1961-71 | 32.57 | 29.64 | 30.14 |

Source : *District Census Handbook*, various years.

Table 2
Immigration and Urbanization in Nadia during 1946-1955

| | | |
|--|-------------------|-------------------|
| 1. Urban population in 1941 (U_1) : 116284 | | |
| | <i>Estimate 1</i> | <i>Estimate 2</i> |
| 2. Reported migration to the urban areas | 67696 | 95281 |
| 3. Per cent increase in urban population due to immigrants $\frac{M_2}{U_1} \times 100$ | 58.22 | 81.93 |
| 4. Per cent increase in rural population due to immigrants $\frac{M_1}{R_1} \times 100$ | 46.42 | 51.93 |
| 5. Per cent urbanization due to immigrants | 5.91 | 8.32 |

Notes : Estimate 1 : Estimated on the basis of Report 1951(a)
Estimate 2 : Estimated on the basis of Report 1956

M_1 = Refugees migrating to rural areas

M_2 = Refugees migrating to urban areas

R_1 = Original population in the rural areas

U_1 = Original population in the urban areas

Source : *District Census Handbook (1971)*, Report, 1951(a) and Report, 1956.

Table 3

Decadal Variation in Population in 5 leading Towns of Nadia

| <i>Decade</i> | <i>Nabadwip</i> | <i>Krishna- nagar</i> | <i>Chakdaha</i> | <i>Ranaghat</i> | <i>Santipur</i> |
|---------------|-----------------|---------------------------|-----------------|-----------------|-----------------|
| 1901-1911 | 14.71 | -4.37 | -15.59 | 12.65 | -0.72 |
| 1911-1921 | 24.88 | -4.97 | 5.78 | -2.01 | -7.16 |
| 1921-1931 | 21.03 | 8.85 | -23.58 | 18.06 | 0.81 |
| 1931-1941 | 62.15 | 31.84 | 37.89 | 44.70 | 19.61 |
| 1941-1951 | 84.08 | 56.30 | 179.80 | 70.21 | 41.89 |
| 1951-1961 | 29.42 | 40.76 | 128.27 | 25.66 | 20.69 |
| 1961-1971 | 29.29 | 21.91 | 32.08 | 35.58 | 19.49 |

Source : *Census Handbook*, of various years.

Table 4

**Estimate Percentage Increase in Urban Population
(1941-1951) due to Immigration in 5 leading Towns**

| <i>Towns</i> | <i>Estimate (1)</i> | <i>Estimate (2)</i> |
|--------------|-------------------------|-------------------------|
| Nabadwip | 47.20 | 86.89 |
| Krishnanagar | 44.69 | 69.85 |
| Chakdaha | 121.88 | 341.00 |
| Ranaghat | 39.25 | 66.81 |
| Santipur | 29.11 | 41.30 |

Notes : Estimate 1 : Estimated on the basis of 1951 census data on urban population.

Estimate 2 : Estimated on the basis of 1941 census data on urban population.

Source : *District Census Handbook 1971*, and Report 1956.

Table 5
Extent of Urbanization : 1901-1971

| Decade | Per cent of total population in urban areas | Variation in per cent urban | Per cent variation in per cent urban |
|--------|---|-----------------------------|--------------------------------------|
| 1901 | 10.30 | — | — |
| 1911 | 10.32 | 0.02 | 0.19 |
| 1921 | 11.22 | 0.90 | 8.72 |
| 1931 | 11.89 | 0.67 | 5.97 |
| 1941 | 13.84 | 1.95 | 16.40 |
| 1951 | 18.18 | 4.34 | 31.36 |
| 1961 | 18.41 | 0.23 | 1.27 |
| 1971 | 18.74 | 0.33 | 1.79 |

Source : *Census Handbook*, of various years.

Table 6
Decay of the Old Towns of the Districts Since 1951

| Towns | Extent of Urbanisation* | | | | Variations** | | |
|--------------|-------------------------|------|------|------|------------------|-------------------|------------------|
| | 1941 | 1951 | 1961 | 1971 | 1941-1951 | 1951-1961 | 1961-1971 |
| Nabadwip | 3.64 | 4.92 | 4.25 | 4.22 | 1.28 (35.16) | -0.67 (-13.62) | -0.03 (0.70) |
| Krishnanagar | 3.81 | 4.37 | 4.11 | 3.85 | 0.56 (14.70) | -0.26 (8.75) | -0.26 (-6.33) |
| Chakdaha | 0.65 | 1.34 | 2.04 | 2.08 | 0.69 (106.15) | 0.70 (52.24) | 0.04 (1.96) |
| Ranaghat | 1.96 | 2.45 | 2.05 | 2.14 | 0.49 (25.00) | -0.40 (-16.33) | 0.09 (4.39) |
| Santipur | 3.56 | 3.70 | 2.99 | 2.74 | 0.14 (3.93) | -0.71 (-19.19) | -0.25 (-8.36) |

* Extent of Urbanization has been measured by the ratio of the population of the town with that of the district.

** Figures in brackets denote 'per cent variation'.

Table 7
Percentage Distribution of the Male Work-Force of the District (1941-71)

| Activities | 1941(a) | 1951 | 1961 | 1971 |
|------------------------------------|---------|-------|-------|-------|
| Cultivation | 68.25 | 41.28 | 45.15 | 38.85 |
| Agricultural Labour | | 12.06 | 17.17 | 27.51 |
| Allied Agricultural Activities (b) | 1.10 | 1.18 | 3.40 | 2.88 |
| Extractive Sector | 0.00 | neg | 0.15 | 0.02 |
| Industry including household | 9.83 | 9.70 | 11.85 | 11.28 |
| Construction | .. | .. | 1.41 | 0.97 |
| Transport | 2.58 | 1.62 | 2.49 | 2.75 |
| Trade & Commerce | 8.34 | 10.05 | 7.53 | 7.41 |
| Urban services (c) | 5.08 | 7.52 | 4.53 | 3.99 |
| Rural services | .. | 16.60 | 6.32 | 4.32 |
| Others (d) | 4.93 | .. | .. | .. |

(a) Excluding 'beggars and vagrants' and 'insufficiently described' persons.

(b) Allied agricultural activities includes fishing, livestock raising, hunting, plantation and such other activities.

(c) Any service in the urban area.

(d) Includes 'persons living on their own income' and 'domestic services'.

Source : Census of India, *District (Nadia) Census Handbook*, 1941, 1951, 1961, 1971 and *Means of livelihood tables*, West Bengal (Y sample).

Table 8
Growth (decay) of Male work-force absorption in Urban Sectors (1941-71)

| | Per cent work-force in urban activities ^(a) | Variation | Per cent variation in per cent of work-force in urban activities |
|------|--|-----------|--|
| 1941 | 25.83 | — | — |
| 1951 | 28.89 | +3.06 | +11.85 |
| 1961 | 27.96 | —0.93 | — 3.22 |
| 1971 | 26.42 | —1.54 | — 5.51 |

(a) For explanation, see footnote 13.

Table 9
Percentage Distribution of Male work-force in Urban Nadia (1951-71)

| Activities | 1951 | 1961 | 1971 |
|--------------------------------|------------|-------|-------|
| Cultivation | 4.81 | 2.29 | 3.40 |
| Agricultural Labour | 1.48 | 1.65 | 6.50 |
| Allied Agricultural activities | 0.55 | 0.96 | 2.15 |
| Extractive activities | negligible | 0.04 | 0.06 |
| Industry including household | 17.98 | 28.47 | 29.17 |
| Construction | — | 4.32 | 3.10 |
| Trade & Commerce | 27.83 | 24.17 | 22.78 |
| Transport | 5.71 | 9.94 | 9.92 |
| Services | 41.63 | 28.15 | 22.92 |

Source : *District Census Handbook*, of various years.

Table 10(a)

**Percentage distribution of Male work-force in
various sectors in Urban Nadia (1951-71)**

| Sectors | 1951 | 1961 | 1971 |
|--------------------------------------|-------|-------|-------|
| Agriculture | | | |
| Cultivation & allied activities | 5.36 | 3.25 | 5.55 |
| Agricultural labourers | 1.48 | 1.65 | 6.50 |
| Industry & other material production | 17.98 | 32.83 | 32.33 |
| Production of services (Tertiary) | 75.17 | 62.26 | 55.62 |

Source : Ibid.

Table 10(b)

**Measures of variation of distribution of Male work-
force in Urban Nadia (1951-71)**

| Sectors | Percentage of total variation in the decade | | Percentage rise or fall in the sector over previous decade | |
|---|---|---------|--|---------|
| | 1951-61 | 1961-71 | 1951-61 | 1961-71 |
| Agriculture | | | | |
| Cultivation and allied activities | -14.04 | +32.12 | -39.37 | + 70.77 |
| Agri. labour | + 1.13 | +67.83 | +11.49 | +293.93 |
| Industry & other mate- rial production | +98.86 | - 6.99 | +82.59 | - 1.52 |
| Production of Services (Tertiary) | -85.95 | -92.87 | -28.36 | -106.65 |
| Total | 100.00 | 100.00 | - | - |

Source : Ibid.

Notes

1. The term 'urban' has been used in the study in a restricted sense. It adheres to the census definition of 'town' as adopted in 1951 census of West Bengal (which has subsequently been accepted as standard census definition all over India since 1961).
2. By 'rate of urban growth' we mean the per cent increase in the urban population in a given decade.
3. By 'rate of urbanization' we mean the per cent increase in the proportion of the urban population to the total population during a given decade.
4. Nadia covers only 4.46% of the total geographical area of the State. According to 1971 census, the population of Nadia is about 5% of the total population of West Bengal.
5. We are considering only that part of erstwhile Nadia of undivided Bengal which now belongs to India.
6. Bose (1974), page 59.
7. *Utbandi* is a type of tenurial arrangement under which 'the holding is not fixed either in area or in position but consists of a variable parcel or parcels of land ascertained by measurement or inspection made at least once a year. The rent is paid for each year or season in respect of the parcel or parcels of land which has been ascertained by the said measurement or inspection.' (See Government of West Bengal, *District Gazetteers, Nadia* (1978), page 291). *Utbandi* had been the prevalent form of tenurial arrangement in Kaliganj, Nakasipara, Nabadwip, Krishnanagar and Santipur regions of the district.
8. The cholera epidemic of 1902-1908 and Influenza epidemic of this period.
9. According to Census 1951, total migration to Nadia had been 464462, of which 426907 had been displaced persons from East Pakistan, the rest being intra-state immigrants. The estimated emigration from the district (of the Muslim population to East Pakistan) being about 120,000, the net inflow to the district comes to 344462 persons, net inflow from East Pakistan being 306907 persons.
10. Taken together, these towns accounted for 98%, or 95% and more than 80% of total urban population of the district in 1941, 1951 and 1971, respectively.
11. As mentioned in A. Mitra, (1953) from the settlement report, 1918-26.

12. Immigration as percentage of the total population had been 0.95 and 0.83 in 1921 and 1931, respectively (compiled from Census of India, West Bengal, *District Census Handbook*, 1921 and 1931).
13. Of course, this is not a census category. Any 'service' (as defined by census) in the urban area has been assumed to belong to such a category.
14. 'Urban activities' does not necessarily mean activities in the urban areas. These are activities like extraction, household and non-household manufacture, construction, trade, transport and urban services. However, the urban percentage of the male work-force in those sectors is substantially high in Nadia (see Census of India, West Bengal, *District Census Handbook*, 1971).
15. Harris & Todaro (1970). Quoted here from Todaro (1976).
16. For a study on the industrial stagnation with special reference to West Bengal, see Debdas Banerjee (1982). This gives an idea about recent stagnation in industrial activities in Calcutta Urban conglomerate because most of industrial activities of the state is concentrated near Calcutta.
17. Compared to other districts of the state, Nadia's performance in agriculture is moderate. Thus, in terms of the index of agricultural production, Nadia ranked 5th during 1979-1980. HYV crops as percentage of gross cropped areas was just 13.04% in 1974-1975, the rank being 6th. The rank of the district in terms of the non-traditional irrigation as percentage of gross cropped area was 7th during 1976-1977. For a detailed study, see R. Khasnabis and J. Chakravarty (1982).

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'TURN-OVER MIGRATION' : THE CASE OF DURGAPUR

Sukumar Sen

Background

The movement of population or migration, as it is called, has been and remains an essential component of economic development, social change and political organization. Manpower flow and the effects on the labour market give rise to far-reaching consequences in the spatial relationships of people to their total environment. The growth of cities and the development of new resources and territories depend upon the settlement, temporary or permanent, of individuals in diverse locations away from their place of birth and upbringing.¹

It is needless to say that in the course of the accentuation of industrialization and consequent urbanization, migration constitutes an important component. Bouge and Zacharia hold that rural to urban migration is by far the major component of urbanization and is the chief mechanism by which all of the world's great urbanization trends have been accomplished.² This is true in case of India too. Urban areas of India have swelled significantly due to immigration from the rural areas; it has been found that 30 to 60% of the population of Indian cities have been residing in the cities for less than 20 years.³ Zacharia and Ambannavar,⁴ on the contrary, point out that, during 1951-61, the volume of rural-urban migration fell to 5.2 million from 8.2 million during 1941-51, a fall of 37%, while the extent of urbanization was about the same during these two decades. This naturally leads to the assumption that urban population in India has also grown by natural increase rather than merely by immigration, particularly, during 1951-61. Another estimate by Bose⁵ reveals that during 1951-61, natural increase in the urban population was of the order of 10-12 millions while net rural-urban migration was of the order of 5-7 million. Census data on this issue is inadequate and vague which restrains one from reaching any definite conclusion. But one point can be emphasized, viz., that

immigration from rural areas to cities, barring newly developing industrial cities, has dwindled. As Sovani⁶ asserts, immigration is not predominantly of the 'push' type. Rural people, though living in miserable conditions, not always migrate to cities. Bose⁷ also points out that push factors operate in the city also, which are termed as 'push-back factors'. To him, in-migration does not occur as a one way traffic—from rural to urban, but that there is a high rate of 'turn-over' migration indicating push to and fro.

The present study attempts to trace the migration pattern in the process of urbanization of the industrial city of Durgapur. In the courses of urbanization in India several such cities came into being, thanks to the architects of the Five Year Plans—which are termed as 'industrial cities', since industry was the only causative factor behind their birth. Unlike other urban or urbo-industrial cities, these were 'grafted' human habitations with definite and pre-determined plans. Thus, the post-independence era in India has seen the eruption of a number of 'steel' cities, and Durgapur is one of the more important among them; its growth rate of population during 1961-71 being the highest among the steel cities of the country. Table 1 would demonstrate this point.

Though the city of Durgapur originally grew as a concomitant to the steel industry, yet other industries, with their townships, began to flock in the region and, within a short period, the whole region was seen humming with industrial activities. At present, there are eight large scale industries, ten medium-scale ones and a substantial number of small-scale industries in the region. The total investment, including all the industries, is nearly of the value of Rs. 700 crores. There are few parallels in this country, or for that matter in the world, where investments of such a large magnitude have occurred in so short a period. Unlike other new towns in India, usually dominated by one particular industry, Durgapur is the single largest industrial new town with a registered factory working force of over 50,000 and at least another 30,000 engaged in ancillary and service occupations. A glimpse of the major industries may be had from Table 2.

This tremendous growth indicates the prospect of Durgapur to emerge as the ace industrial city of India—the 'Ruhr' of the country. Its locational, strategic and economic advantages mark it out as a place of prominence. It is against this background that the present study of manpower flow in this region has been undertaken.

The sample

The sample for the purpose of collecting data for this study has been

drawn by using stratified random sampling techniques. Seven industrial townships which constitute the core of the Durgapur industrial complex have been chosen for the study, while the non-industrial urban area in Durgapur has been kept outside the purview of the present study. After taking account of the total households in these townships and considering the number of various categories of staff, they have been grouped into six categories, namely, managerial, non-technical executive, technical executive, non-technical subordinate, technical sub-ordinate and worker. This has been done with the purpose of making the sample representative of the cross-section of the personnel.

After grouping them into these six categories, random sampling has been done on a proportional basis for each category. Altogether 365 households have been contacted which constitute the effective sample of the study.

Durgapur : historical outline

It is superfluous to mention that the city of Durgapur, established with a definite purpose of infusing industrial activities, will attract people. In fact, much before the birth of the Asansol-Durgapur industrial complex, the region evidenced a steady growth of population. During the late 19th century this area, then part of the Ranigunj sub-division, was more populated than other parts of the district due to the opening of the coal mines. Besides, geographical and prophylactic factors were two other subsidiary causes. For example, because of its comparative higher altitude, the area was free from floods and, due to its dry climate, it was less affected by malaria. Thus, during the period from 1872 up to independence, the annual rate of growth of population was 1.4% per year.⁸

However, prior to 1952, one does not find the name of Durgapur in the industrial map of India. It was referred to as a village within the Burdwan district of West Bengal (India), on the Damodar and fifteen miles south-east of Ranigunj, where bricks and tiles were manufactured and rice, wheat, sugarcane and potatoes were produced.⁹ In the census report of 1951, it was mentioned as a union within the Police Station of Faridpur with a population of 7,997 persons comprising 4,025 males and 3,972 females.¹⁰ Faridpur Thana area had also been declared as rural tract in the said report.¹¹ The extent of the rural character of Durgapur at that time may be understood from the Table 3.

Most of these villages have now been merged either within the factories or within the industrial townships of Durgapur. The 1961

census report records 41,696 as the population of Durgapur including 31,174 males and 10,522 females.¹² But Durgapur's population, as given by 1961 census, is only the population of Durgapur Steel Project and of Durgapur Coke Oven Plant areas. Nor does it include the figures of non-basic workers. However, next year, the population reached 60,000. In the census report for 1971, these two towns have been merged together to form Durgapur (Notified Area). The 1971 census report shows the population of Durgapur as 206,638.¹³ The tremendous growth of the city in terms of population can be followed from Table 4, which gives comparative growth figures for Asansol, Burdwan and the entire state.

The table shows that this region had always had a higher growth rate than that of the rest of West Bengal and the decadal variation during 1961-71 was simply unprecedented. It may be added that the 1971 census included several villages of the region within the notified area apart from the 'Steel' & 'DPL' townships. This projected a picture of population boom. The 1971-81 decade, on the contrary, has seen a steep fall in the growth rate. The 1981 Census records the population of Durgapur as 305,838, a growth rate of 48.01% only.¹⁴ There is, however, no denying the fact that the rate of immigration reached its pinnacle during the period from 1961-71, particularly from 1959-65. While the total volume of population is on the increase, there is a steady fall, since 1967, in the number employed in the organized sector. This is reflected in the low growth rate during 1971-81 period.

Of the total migrants surveyed, those coming from the urban areas constitute majority, though the number of immigrants from the rural areas is not insignificant. Only 0.55% of the population is native (Table 5).

Survey : migrants

Immigration rate reached its peak during 1960-66. Due to the commissioning of several industries during this period, Durgapur held out prospects for easy employment, which caused the migration boom. But while the shrinking of employment potentialities in the organized sector from 1967 onwards has somewhat discouraged immigration, there is no reason to believe that the immigration rate has dwindled in the Durgapur urban complex taken as a whole. As one author observes 'the experience of Eastern India in general, and the Asansol-Durgapur region in particular, has been, that immigration occurs in expectation of employment, but not in any relation to the actual employment available.'¹⁵ A survey in 1966 indicated overt unemployment of over .1% in Asansol-Durgapur.¹⁶

This has not declined, rather increased, as it may be deduced from the above-mentioned table and also in view of the general employment situation in Durgapur.

Though it may seem that the majority of the people of Durgapur moved into the city in search of employment, the actual situation is a little bit different. Both 'push' and 'pull' factors acted as the motive force for immigration into Durgapur. The survey reveals that 49.31% of the migrants moved into the city in search of a better employment. At the time of the inception of new industrial units, the authorities recruited both experienced and inexperienced persons; but, during the period of recession in industries, recruitment of inexperienced persons was virtually stopped and only skilled and experienced personnel were taken in cases of extreme need.

Unemployment in the origin (20.82%) is the next important factor behind immigration. Insufficient employment (7.40%) and transfer (6.85%) are two other mentionable factors. Lack of educational facilities (3.56%), dislike of employment (2.19%), migration with family (2.19%), family differences (1.10%), lack of amenities (1.10%), not having enough land to cultivate (0.82%), and meagre income (0.55%) also have their own shares.

Table 6 shows the pattern of spatial mobility among the different categories of workers.

The table reveals that, among the migrants, those coming from other districts of the state constitute the highest number. As has already been mentioned, Durgapur initially required skilled and experienced hands. Hence, such persons from the Calcutta-Howrah-24-Parganas industrial areas flocked in larger numbers taking the major shares in all categories of jobs excepting managerial posts. Second, people from the peripheral districts immigrated to find an avenue of employment close to their native place. Third, displaced persons from the then East Pakistan (now Bangladesh) and West Pakistan, rushed into the city in search of employment.

One interesting characteristic of the immigration pattern among the migrants from Pakistan and Bangladesh is that, excepting the managerial category, they have higher representation in higher categories of jobs, namely, technical and non-technical executive, compared to lower categories of jobs, namely, technical-subordinate and labour. People of the same district constitute a much smaller number in all categories of jobs. There may be several causes for this. First, excepting Raniganj and Asansol, the district of Burdwan is predominantly an agriculture district where chances of

accumulating technical experience are meagre. This is borne out by the fact that, of the total migrants from the same district who are employed in lower categories of jobs, namely, technical subordinate, non-technical subordinate and labour, the majority of the people are employed in non-technical jobs. Among the higher categories of jobs, none belongs to the managerial ranks and their representation in non-technical and technical executive jobs is much less than that of the migrants from other places, for example, migrants from other districts of the state, peripheral districts and even migrants from East Pakistan (now Bangladesh) and West Pakistan. Second, 'rural folk surrounding a township are prone to maintain rural-urban dichotomy....'¹⁷ From beyond the immediate neighbourhood, people do move into urban areas; but they mostly commute, taking urban jobs but avoid becoming urbanites. Among all categories of jobs, migrants from other states of India take the major share in managerial jobs.

In this connection, an interesting side of the attitude of the migrants has been explored through the present study. Asked whether they have any intention to settle at Durgapur, the respondents' answers exposed at least one aspect of migration pattern in Durgapur. It was revealed in the field survey that 50.63% of the respondents to the survey answered in the negative. 32.88% said 'Yes' and 16.44% declared that they had not yet decided. Of the persons who answered in the negative, 35.68% said that they had family ties elsewhere, 17.30% had positive dislike for industrial environment, 15.68% wanted to emigrate due to lack of social contacts, 12.43% due to higher cost of living, 5.40% due to old age and ill health, 3.24% due to lack of adequate employment, 2.70% due to housing difficulties and 7.57% due to other reasons. That the people living in Durgapur have a strong familial bond is evident from Table 7.

It is apparent from the foregoing table that the majority of the persons maintain regular connection with their native place and quite a good number have economic interests at their native places. From the intention of the respondents and from the frequency of their visits to their native places, conclusion may be drawn that the immigration pattern in Durgapur, which may rightly be called a city of immigrants, is of a transitory rather than of a permanent nature. However, there is one underlying trend which speaks of a different kind of migration pattern (vide Annexure I). Study on the place of origin and pattern of ownership of land at the native place shows that

82.22% of persons who have migrated within the district and 50% of the persons coming from peripheral districts have landed property at their native place, while 24.32% of the persons who have moved in from other districts of the state and 23.08% of the persons immigrating from other states of India have landed property at the native place. None of the immigrants (refugees) from East Pakistan (now Bangladesh) and West Pakistan has landed property. It has been discovered through the interview that the persons belonging to the same/peripheral districts who have land at their native place, invest their income from urban industrial jobs in land at home and, as has been pointed out earlier, they do not have any intention to settle in the city of Durgapur. On the other hand, employees who hail from East Pakistan (now Bangladesh) and West Pakistan are prone to settle at Durgapur. They are of opinion that when they have to settle somewhere after being uprooted from their native place, it is preferable to settle in this city because it is their workplace.

On the whole, the case of Durgapur reveals the character of 'turn-over' migration as conceptualized by Ashis Bose. However, our investigation into the pattern of immigration in terms of place and economic background of the immigrants somewhat qualifies Bose's thesis. The qualification that our findings might insert is that if the attraction for landed property justifies the push back factor in the case of migrants from other districts/states of India, the push factor prevails in the case of migrants from East Pakistan (now Bangladesh) and West Pakistan. Though the Durgapur urban complex presents a pattern of turn-over migration, the process of push to and fro is not an absolute one. The turn-over pattern is undoubtedly a reflexion of the nature of property ownership of the migrants concerned.

Table 1
Growth of Population In Steel Cities

| Name of City | Approx. population (in thousands) | | Decade growth rate % | |
|--------------|--------------------------------------|-----|----------------------|----------|
| | 1971-1981 | | 1961-'71 | 1971-'81 |
| Jamshedpur | 465 | 670 | 42.00 | 46.88 |
| Durg-Bhilai | 245 | 490 | 83.99 | 99.96 |
| Rourkela | 173 | 321 | 91.06 | 86.27 |
| Bokaro | 108 | 261 | New | 143.79 |
| Bhadravati | 101 | 130 | 54.10 | 28.42 |
| Durgapur | 207 | 305 | 395.58 | 48.01 |

Source : Census of India, 1981; S. C. Dube, *India Since Independence*, New Delhi, 1977.

Table 2
Major Industries of Durgapur

| Unit | Manufacture | Investment (in crores) | Nos. employed (approx.) |
|---|---|---------------------------|----------------------------|
| DURGAPUR STEEL PLANT (Govt. of India) | 1.6 million tonnes of steel pro- ducts | 260 | 27,000 |
| ALLOY STEEL PLANT (Govt. of India) | 0.1 million tonnes of special steel. | 95 | 7,000 |
| MINING & ALLIED MACHINERY COR- PORATION (Govt. of India) | Mining machinery | 30 | 7,000 |
| DURGAPUR PROJECT LTD. (Govt. of West Bengal) | Coke oven, power, coal washery, gas | 30 | 6,200 |
| D.V.C. THERMAL POWER STATION | Power | 26 | 1,800 |

Table 2 (Continued)

| Unit | Manufacture | Investment (in crores) | Nos. employed (approx.) |
|---|--------------------------------------|---------------------------|----------------------------|
| DURGAPUR CHEMICALS (Govt. of West Bengal) | Basic inter- mediate chemicals | 11 | 1,000 |
| FERTILIZER CORPO- RATION (Govt. of India) | Urea | 30 | 1,450 |
| ACC-VICKERS- BABCOCK | Boilers & cement machinery | 15 | 2,200 |

Source : Government of West Bengal, *Durgapur-A Decade's Growth*, published by Durgapur Development Authority (D.D.A.) & Govt. of West Bengal.

Table 3
Erstwhile Villages, now merged into the city of Durgapur

| Name of the village | Area (in acres) | No. of occupied houses | Population |
|------------------------|--------------------|---------------------------|------------|
| Amrai | 1,218.33 | 431 | 2055 |
| Angadpur | 508.47 | 132 | 706 |
| Benachity | 1,050.97 | 110 | 490 |
| Bhiringhee | 1,499.25 | 278 | 1104 |
| Birbhanpur | 1,225.59 | 301 | 1162 |
| Faridpur | 2,830.59 | 300 | 1140 |
| Gopinathpur | 6,552.16 | 1159 | 4848 |
| Kamalpur | 1,936.83 | 164 | 550 |
| Mahiskapuri | 1,313.78 | 112 | 459 |
| Mamra | 502.62 | 37 | 109 |
| Nadiha | 822.21 | 157 | 737 |
| Phuljhuri | 1,139.35 | 122 | 632 |
| Pursha | 425.28 | 129 | 560 |
| Radhamadhabpur | 1,246.57 | 105 | 726 |
| Raturia | 1,010.03 | 142 | 849 |
| Waria | 521.81 | 98 | 507 |

Source : Census of India, Burdwan District Handbook, Village Directory, p. 946.

Table 4
Percentage variation of population increase from
1911-1981

| | 1911 | 1921 | 1931 | 1941 | 1951 | 1961 | 1971 | 1981 |
|----------------------|-------|-------|-------|-------|-------|-------|--------|-------|
| West Bengal | 6.25 | 2.91 | 8.14 | 22.93 | 13.22 | 32.80 | 26.87 | 22.96 |
| Burdwan | 0.37 | 6.40 | 9.28 | 19.99 | 15.92 | 40.65 | 27.04 | 22.80 |
| Asansol and Durgapur | 47.05 | 20.90 | 39.73 | 87.64 | 36.40 | ** | 395.58 | 48.01 |

**Durgapur came in vogue

Source : Census of India of relevant years.

Table 5
Survey : Migrants classified according to years and places

| Year | Migration from rural areas | Migration from urban areas | Total | % |
|---------|----------------------------|----------------------------|-------|--------|
| Native | — | — | 2 | 0.55 |
| 1951-55 | 2 | 3 | 5 | 1.38 |
| 1956 | 3 | 3 | 6 | 1.64 |
| 1957 | 4 | 4 | 8 | 2.19 |
| 1958 | 4 | 7 | 11 | 3.01 |
| 1959 | 14 | 12 | 26 | 7.12 |
| 1960 | 13 | 10 | 23 | 6.30 |
| 1961 | 15 | 11 | 27 | 7.12 |
| 1962 | 21 | 24 | 45 | 12.33 |
| 1963 | 45 | 44 | 89 | 24.38 |
| 1964 | 15 | 31 | 46 | 12.60 |
| 1965 | 13 | 6 | 19 | 5.21 |
| 1966 | 7 | 9 | 16 | 4.38 |
| 1967 | 3 | 4 | 7 | 1.92 |
| 1968 | 4 | 3 | 7 | 1.92 |
| 1969 | 3 | 3 | 6 | 1.64 |
| 1970 | 1 | 2 | 3 | 0.82 |
| 1971 | 1 | 3 | 4 | 1.10 |
| 1972 | 5 | 1 | 6 | 1.64 |
| 1973 | 2 | 0 | 2 | 0.55 |
| 1974 | 1 | 2 | 3 | 0.88 |
| 1975 | 1 | 4 | 5 | 1.38 |
| Total | 177 | 186 | 365 | 100.00 |

Source : Field Survey.

Table 6
Immigrants according to places of migration.

| Same district | Peripheral districts | Other districts of the State | Other States of India | East & West Pakistan. | Total |
|-------------------------|----------------------|------------------------------|-----------------------|-----------------------|---------------|
| Managerial : | — | 1 (20.00) | 1 (20.00) | 3 (60.00) | 5 (100) |
| Non-tech. Executive : | 1 (0.09) | — | 6 (54.55) | 1 (9.09) | 3 (27.27) |
| Technical Executive : | 3 (12.50) | 6 (25.00) | 7 (29.17) | 3 (12.50) | 5 (20.83) |
| Non-tech. Subordinate : | 10 (13.33) | 20 (26.67) | 36 (34.67) | 4 (5.33) | 15 (20.00) |
| Technical Subordinate : | 8 (8.33) | 20 (20.83) | 47 (48.96) | 5 (5.21) | 16 (16.27) |
| Labour : | 23 (14.94) | 37 (24.03) | 61 (29.61) | 10 (6.49) | 23 (14.94) |
| Total : | 45 (12.33) | 84 (23.01) | 148 (40.55) | 26 (7.12) | 62 (16.99) |
| | | | | | 365 (100) |

Source : Field Survey

Table 7
**Stability of migration judged by the frequency of visits to
the native place**

| | No con- nec- tion | To at- tend ma- rriages | To cele- brate festi- vals | Sea- sonal work | Liti- gation | To see relati- ves | Other rea- sons | Total |
|----------------------|----------------------------|-------------------------------|-------------------------------------|-----------------------|--------------------|--------------------------|-----------------------|------------------------|
| One/twice a week | - | - | - | 2 (0.55) | - | 8 (2.19) | 16 (1.64) | 16 (4.38) |
| One/twice a month | - | - | 3 (0.82) | 19 (5.21) | - | 67 (18.36) | 11 (3.01) | 100 (27.40) |
| One/twice a year | - | 1 (0.27) | 9 (2.47) | 8 (2.19) | 1 (0.27) | 42 (11.52) | 9 (2.47) | 71 (19.18) |
| Occasion- ally | - | 2 (0.55) | 6 (1.64) | 4 (1.10) | - | 49 (13.42) | 15 (4.11) | 76 (20.82) |
| Few & far between | - | 1 (0.27) | 2 (0.55) | 3 (0.82) | - | 13 (3.56) | 6 (1.64) | 25 (6.85) |
| No connection | - | - | - | - | - | - | - | 78 (21.37) |
| Total | 78 (21.37) | 4 (1.10) | 20 (5.48) | 36 (9.86) | 1 (0.27) | 179 (49.04) | 47 (12.88) | 365 (100.00) |

Source : Field Survey.

Annexure I

Place of origin and the pattern of ownership of land at the native place

| | Same district | | Peripheral districts. | | Other districts of the State | | Other states of India | | East & West Pakistan | | Total |
|-----------------------|-----------------|--------------|-----------------------|---------------|------------------------------|----------------|-----------------------|---------------|----------------------|----------------|-------|
| | A | B | A | B | A | B | A | B | A | B | |
| Managerial | - | - | - | 1 (2.58) | - | 1 (0.89) | - | 3 (15.00) | - | - | 5 |
| Non-tech. Executive | N 1 (2.70) | - | - | - | 3 (8.33) | 3 (2.68) | - | 1 (5.00) | - | 3 (4.84) | 11 |
| Technical Executive | N 1 (2.70) | 2 (25.00) | 5 (11.90) | 1 (2.38) | 1 (2.78) | 6 (5.36) | - | 3 (15.00) | - | 5 (8.06) | 24 |
| Non-tech. Subordinate | N 10 (27.03) | - | 12 (28.57) | 8 (19.05) | 5 (13.89) | 21 (18.75) | - | 4 (20.00) | - | 15 (24.19) | 75 |
| Technical Subordinate | N 6 (16.22) | 2 (25.00) | 7 (16.67) | 13 (30.95) | 6 (16.67) | 41 (36.61) | 4 (66.67) | 1 (5.00) | - | 16 (25.81) | 96 |
| Labour | N 19 (15.35) | 4 (50.00) | 18 (42.86) | 19 (45.24) | 21 (58.33) | 40 (35.71) | 2 (33.33) | 8 (40.00) | - | 23 (37.10) | 154 |
| TOTAL | 37 (82.22) | 8 (17.78) | 42 (50.00) | 42 (50.00) | 36 (24.32) | 112 (75.68) | 6 (23.08) | 20 (76.92) | - | 62 (100.00) | 365 |

Explanation : 'A' denotes those who own land for cultivation at a native place.

'B' denotes those who do not own any land for cultivation at the native place.

'N' denotes number. 'P' denotes percentage.

Source : Field Survey.

Notes

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THE IMPACT OF STEEL TOWNS ON REGIONAL DEVELOPMENT : A CASE STUDY OF DURGAPUR

Nandita Basak

Introduction

A number of steel towns have emerged in India during the post-independence period as a part of the national industrialization programme. These towns attracted a huge number of immigrants from far away areas and, thereby, brought about a redistribution between the rural and the urban population. These towns also opened up possibilities of diverse economic activities in the surrounding regions and thus stepped up the speed of the urbanization process in their respective regions. The percentage shares enjoyed by the steel towns in the urban population and among the urban workers of the respective states were found to increase gradually in the three successive censuses. If the incremental urban population and the incremental urban workers are considered, the importance of the steel towns appears to have increased even more. For this reason, a study of the pattern of growth of the steel towns and the part played by them in the urbanization process of their respective regions may be of some interest. Of special interest is the study of the impact of town-growth on the economic and demographic life of the surrounding region.

The present research is a part of a larger study on the growth process of a steel town viewed from a regional perspective. The purpose of the present research is to trace the important characteristics of the growth pattern of five major steel towns of India during the post-independence period, and also to study the impact of growth of steel towns on the surrounding region. In particular, a case study of Durgapur has been undertaken to examine the spatial 'spread-effect'.

Since the iron-steel industry is a mineral based, weight-losing industry with high fuel consumption, the location of the industry in India has been guided by the proximity to the coal-field regions or iron mines or both. The steel towns of India have therefore centred

around the eastern coal-field region of West Bengal and Bihar, and the rich iron mining belt of South Bihar, Orissa, Eastern Madhya Pradesh and Karnataka.

Unlike many other large cities of India, the steel towns were not the outcome of an indigenous growth process. Most of the steel towns are planned towns and, starting almost from wilderness, they reached the fullfledged growth stage within quite a short time span. A number of stages can be noticed in the growth phase of these towns :

(i) The initial stage is marked by the building of the necessary infrastructure. Roads, bridges, railway tracks and power plants are constructed and provisions are made for drainage, sewerage and water-works.

(ii) In the next stage, the factories and townships are built. This stage is characterized by a very high proportion of construction workers.

(iii) The core industries eventually lead to the growth of the subsidiary and related industries; for example, the feeder industries, the ancillaries or units using the products and the by-products of the basic industries.

(iv) The growth of factories and townships subsequently lead to the growth of service activities, for example, the production-related (trade-commerce-transport) and the consumption-related (medical-recreational-educational) activities, the financial institutions (commercial and co-operative banks, insurance companies, hire-purchase companies, brokerage houses) and others.

Such growth normally tends to have important implications for the demographic structure of the towns. One of the most important features of a steel town lies in its migrant-characteristics. New towns usually attract huge number of migrant workers in the initial stage of growth and, therefore, are characterized by an extra-ordinarily high growth rate of population. The rate of migration of the workers subsequently slows down as the employment opportunities are gradually exhausted. The non-working component of the population, however, continues to expand so long as the immigrants continue to bring in their families.

The migrant character of the town can be observed from the dependency ratio, the work participation rate for the male workers WPR(M), the gender-ratio and the age-distribution. In the initial phase the towns tend to exhibit unusually high WPR(M) and a low

dependency ratio. Excessive male domination with an unusually low percentage of female to male ratio and an unbalanced age-distribution with an excessively high proportion in the working age group (15-59 years) in total population are also observed in this phase. In a more advanced stage of growth the WPR(M) and the dependency ratio move toward the state average. A more balanced gender and age distribution are also achieved by this time.

A comparative study of the old steel town, Jamshedpur and the new steel towns viz., Durgapur, Bhilai, Bokaro and Rourkela would be attempted to test the above demographic and economic hypotheses.

I

Growth of economic activities and migration

In the District Gazetteer of Singhbhum (1910) a reference was made to the village 'Kalimati' consisting of about 25 brick-built houses. In 1907, the site was selected for setting up an iron-steel plant which was completed in 1911. Within a decade, population increased from 5,672 to 57,360. This unprecedented growth of population through immigration could be explained by the simultaneous growth of economic activities in other spheres too. (See Table 1). Originally, the plant had a capacity of producing 50,000 tons of finished steel and 35,000 tons of pig iron. During the First World War, the industry witnessed an expansion of orders; new investments were made in plant and equipment in 1915. Capacity of saleable steel was augmented to 3,36,000 tons. Employment increased from 5,677 to 10,775 between 1911 to 1915. The industry witnessed another phase of expansion in 1934 with the grant of protection. Capacity production of saleable steel was raised from 4,00,000 tons in 1925 to 6,50,000 tons in 1934.¹

The decade of 1920s was one of rapid industrial expansion for Jamshedpur (Table 2). During this period, production base of the town was diversified and a number of industries were started. The decades 1920s, 1930s and 1940s were the years of rapid population growth (Table 3). The growth rate of population slowed down in the next decade and fell below the state average. The growth of factories and other related activities almost reached the upper limit.

A survey undertaken in 1955 on Jamshedpur² shows that about 55% of the migrating families came into the town during the period 1910-1940 which was the peak period of industrial expansion (Table 4). The flow of migration was quite high during 1940-50 which were the years of war and partition. The declining rate of immigration in

recent years of 1950s, 1960s and 1970s shows the close association between growth of employment opportunities and migration.

Experience with Durgapur was also similar. Though the construction work for the Durgapur steel plant started during the Second Five Year plan, the nuclei of the town can be traced back earlier to the period of construction of the Durgapur Barrage by the Damodar Valley Corporation and of the Durgapur Projects Ltd., by the West Bengal Government in the early 1950s. The decade 1960s was marked by a rapid growth of factories in Durgapur. The major public and private sector plants which were started in those years were, Mining and Allied Machineries Corporation (1961), Aec-Vickers-Babcock (1962) Phillips Carbon Black (1962), Alloy Steel Plant (1965), Sankey Wheels Ltd. (1964), Durgapur Chemicals Ltd. (1968), Graphite India Ltd. (1967), Bharat Ophthalmic Glass Ltd. (1968) and others. The capacity of the steel plant was increased in 1965-66 under the Million Tonne Plant Scheme. However, the growth rate of factory employment slowed down in the 1970s (Table 5), leading to a consequent fall in the flow of migration (Table 6).

A study on issues relating migration to Durgapur town between the period 1951 and 1975 shows that the flow of migrants was closely associated with the pace of economic activity. It was found that the speed of migration was accelerated after 1957, reached the peak during 1961-64 and slowed down in the 1970s.

Growth rates, age-gender distribution and work-participation rates of the steel towns, 1961-1981

The growth rates, the age gender-distribution, the work participation rates of the steel towns over the past two decades (Tables 7, 8, 9 and 10) will to some extent explain the nature of the growth process. A comparison between the old steel town, Jamshedpur and the new steel towns would bring out a number of features. Jamshedpur, being a relatively old town, exhibited a stable demographic structure during the last two decades. The population growth rate was lower than that of the other steel towns. The dependency ratio and the age-gender distribution were almost similar to the state averages. The work participation rate for male workers of all ages, WPR(M) and the rate for the male workers of the working age group, WPR(R) closely resembled the state averages, indicating a relatively mature stage of employment and population growth.

In comparison with Jamshedpur, the new steel towns were

characterized by high growth rate of population, particularly for the dependent population, during 1961-71 and 1971-81. Growth rates were excessively high for Durgapur during 1961-71 particularly due to expansion in the area of the town. Growth rate for Durgapur declined in 1971-81 for reasons to be discussed later on. Growth rates of workers for all the steel towns were depressed in 1961-71 mainly due to a substantial fall in employment in the construction category.

As regards the gender structure, male domination was observed in 1961 and 1971, indicating the industrial character of the town. Relatively low dependency ratio and an unbalanced age-distribution showing a higher than average proportion of the working age group in total population were also observed in 1961 (Table 9).

The gender-ratio and the dependency rate of the new steel towns gradually improved in 1971 and 1981, indicating a stabilizing population. Male-domination was still found in Bokaro, a more recent town, and in Rourkela even in 1981. This might be explained by the relatively high growth rate exhibited by these two towns during 1971-81, indicating further scope of expansion. Work-participation rate for males of all ages and for the working age-group were observed to be higher than the state averages, indicating better employment condition in these towns. WPR(M) in 1981 was found to have declined below the state averages in Jamshedpur and Durgapur for reasons to be discussed below.

The recent trends : 1971-81

During the decade 1971-81, growth rates of population, workers and non-workers in Jamshedpur and Durgapur slowed down relative to those for the other towns. The growth rates were, however, higher than the state averages in cases of the other steel towns. Bokaro, being the more recent steel town, exhibited an exceptionally high rate of growth.

Explanation for the varying growth rates may be found in the varying employment conditions of the steel towns: Jamshedpur, being the oldest town, almost reached the saturation level with respect to the growth of employment.

Although Durgapur is of a more recent origin, slowing down of the growth rates was quite marked in the last decade. This may partly be explained by the slowing down of the overall growth rates of the urban areas of West Bengal. The excess of labour supply over labour demand and the overcrowding in the job market of the Calcutta industrial region, along with large scale influx of displaced

persons from East Pakistan (now Bangladesh), pushed a large number of persons toward the newly growing industrial complex of Durgapur. The slowing down of the growth rates in the 1970s was quite an inevitable result of the excessively high growth rate during the 1960s. Relatively high growth rates in Bokaro, Bhilai and Rourkela indicate that these towns still enjoy scope for expansion in employment as well as in size.

Occupational changes

The changing occupational structure as observed for the steel towns during 1961-81, would help to explain the nature of the growth process of these towns.

Comparison between the employment figures as given by the 1961 Census and the figures of 1971 Census becomes difficult due to the changes in the definition of workers in the two censuses. The problem is, however, less seriously felt for the steel towns as the employment groups most affected by the definitional change (e.g., agricultural labour, cultivator, household manufacturing, service activities etc.) do not occupy a high proportion of the total workforce in these towns.

Employment in the 'construction' category declined substantially in all the steel towns during 1961-71; the total fall in employment in four steel towns being about 16,540 during 1961-71. Fall in the construction activity was mainly due to the completion of factories and townships by the end of the 1960s. This depressed the overall growth rate of workers in all the steel towns.

The occupational structure of Jamshedpur almost reached a stable condition while the occupational structure of the new steel towns underwent important changes between 1961 and 1971 (Table 11). It is to be expected that the new steel towns would show a fall in the relative share of primary activities over time, in conformity with the pattern elsewhere. Despite this, the figures show that the share of primary sector increased in Durgapur and Rourkela. This may be mainly due to the expansion in the area of the towns and the inclusion of some erstwhile villages within the boundary of the town.

Though the secondary activities, particularly the non-household manufacturing activities occupied the largest share in the employment structure of all the steel towns, the relative importance of tertiary activities has been on an increase, showing a tendency toward a more balanced occupational distribution over time. If the

detailed breakdown of the tertiary sector is taken into account, the relative share of the production-oriented activity groups (e.g., trade, commerce, transport) shows a considerable increase in all the steel towns over the 1961-71 period, indicating an expansion in the economic base. Relative share of the 'services' group declined over the period in Jamshedpur, but remained almost constant in Rourkela and Bhilai, and increased in Durgapur.

Increase in the service employment in Durgapur can be partly explained by the new administrative status given to the town as a subdivisional headquarters in 1968, and the opening up of a number of Government offices. The unusually high percentage of service employment in Rourkela may be explained partly by the slow growth of manufacturing employment and partly by the tendency towards an inflated service-sectoremployment in the state of Orissa.

Recent trends

Detailed data for the occupational breakdown were not available in the Census of 1981 on a comparable basis. However, from the employment figures available for some selected occupation groups, the changing nature of the occupational structure can be noticed (Table 12). While there was no such important change in the occupational distribution of Rourkela, Bhilai and Jamshedpur, noticeable changes were observed in the occupational structure of Bokaro and Durgapur. The excessively high percentage share of agricultural workers, which was observed in Bokaro in the early years of town growth, was no longer observed in 1981; this might be explained by the growth of the activities in non-agricultural sectors. The percentage share of agriculture and household manufacturing in total main workers in Durgapur gradually moved toward the state averages over the period. The employment data available for Durgapur from sources other than Census indicate that the relative importance of manufacturing activity in total employment declined from 58.5% to 53.8% during 1971-81, but the relative share of agriculture and household manufacturing remained constant, while the tertiary sector continued to increase its relative share in total employment.³

This study of the occupational and the demographic changes in the steel towns over the period 1961-81 brings out certain interesting points. First, all the demographic changes including migratory

movements were closely related to, and depended upon, the pattern of economic activity and employment. The high growth rates in the initial years caused by large scale migration, the declining growth rate in later years, the particular pattern of age-gender distribution or work-participation rates, all represented a part of the same growth process.

Second, though the core sector has so far assumed the leading role in the growth process, it is clear that the rate of growth can only be sustained by the extension of the subsidiary activities. These may include; (a) the feeder industries to the iron-steel and the engineering sector (e.g., refractories, coal-washeries), iron foundries, manufacturing of metal products, ancillary units manufacturing machine parts, chemicals, the industries having input linkages with the core sector (cement, coal-product, chemicals) and others; and (b) non-manufacturing activities e.g., production-oriented and consumption-oriented services.

II

The spatial impact of a steel town

The following section is devoted to the study of the growth impact of a steel town (Durgapur in this case) on the surrounding rural area.⁴

The impact of growth of the urban industrial centre on the surrounding rural region is likely to be transmitted, among others, through the following channels :

(a) The unemployed and the under-employed workers of the neighbouring area would be absorbed in different sectors of the urban labour market; and this would bring about diversification in the occupational structure of the rural area.

(b) A part of the increasing demand for wage goods (e.g., cereals, vegetables, dairy and poultry products) coming from the urban centre would be met, at least partly, by the local rural areas; which would generate favourable impact on rural income.

(c) Increase in the rural income may bring agricultural prosperity by way of increased investment on land. Agricultural productivity may increase through an easy access to the urban credit market, better possibilities of applying modern techniques like improved seeds, fertilizer, minor irrigation facilities etc. A positive correlation has been observed in some studies⁵ between urban growth and agricultural prosperity. The beneficial effect may not be felt if natural increase in population eats up the fruits of growth.

It has, however, been observed by regional economists that the

effective working of spread effect of town growth on the rural surrounding region would depend on the complementarities between the town and the region.⁶ In particular, this would be influenced by the propensity of the household and the manufacturing sectors of the town to spend on local goods and services, and the extent to which the necessary labour, raw materials and other commodities ~~ican~~ be supplied by the local area.

Studies undertaken on urban impact and spread effect have been mainly based on the analysis of the following :

(a) The multiplier effect of purchase of goods and services by the town from the local surrounding area,

(b) The impact of the urban labour market on the demographic and occupational structure of the local rural area.

Regarding the question of purchase of industrial inputs and sale of the product, it has been observed that the urban centres based on basic capital goods industries tend to establish closer links with the regional, national or international economy rather than with the sub-regional or local economy.⁷ The multiplier effects of income-employment generation in such cases, have been concentrated in distant regions, and the scope of income generation in the local areas has been limited.

As regards the purchase of goods and services from local areas for household consumption purposes, the family budget surveys⁸ carried out in the steel towns, Bhilai, Rourkela and Durgapur tend to indicate that the proportion of household income of the inhabitants of the towns which is spent on local purchases is relatively low, indicating limited scope of income-multiplication in the local surrounding region. This provides strong ground for concentrating on the other aspect of spread, i.e. occupational and demographic changes occurring in the local surrounding area as an impact of town growth.

In the present section attempts have been made,

(a) to find out the geographical area on which the socio-economic impact (measured in terms of some selected variables) of the industrial town of Durgapur is directly felt, and

(b) to examine whether there exists any correlation between the degree of spread (represented by the urban impact) and the distance from the town; in particular, to see whether urban influence declines with increasing distance.

The method

A study, based on village as the unit, has been attempted on the basis

of Census 1971 data. Here, urban impact of the steel town Durgapur has been studied over space. Villages with in a distance of not more than 35 km. from Durgapur town have been selected from the districts of Burdwan and Bankura in such a way that in each case Durgapur is the nearest town to these villages. The villages have been grouped according to their administrative districts (viz. Burdwan and Bankura) into Groups A and B and have then been classified according to their distance from the town. The area covered by these villages has been termed as the Durgapur Rural Region (DRR). Urban impact has been estimated in terms of the following eight socio-economic variables, some of which estimate the degree of occupational diversification and economic betterment.

- (1) The percentage share of agricultural workers to total workers.
- (2) The percentage share of non-household manufacturing activities to total employment.
- (3) The percentage share of tertiary activities to total employment.
- (4) The work-participation rate for male (WPR (M)).
- (5) The work-participation rate for female (WPR (F)).
- (6) Number of females per 1000 of male population.
- (7) Density of population per square km.
- (8) The literacy ratio.

The data on these variables have been used to test the following two hypotheses :

1. The impact of the town is spatially so limited that the favourable impact on employment in the surrounding region is mainly the result of commutation rather than migration.
2. Urban impact varies inversely with the distance from the town.

After comparing the Group A and Group B of Durgapur rural region (DRR) with the corresponding district or subdivisonal averages with respect to the above variables, (Table 13 and 14) a number of observations could be made :

- (i) Durgapur rural region exhibited a higher degree of occupational diversification in comparison with the district or the subdivisonal average. The occupational pattern as exhibited by the rural economy of Burdwan and Bankura was characterized by (a) a very high proportion of agricultural activity, (b) a very low proportion of non-household manufacturing employment, (c) relatively low proportion of tertiary employment. Compared to this, the occupational distribution of Durgapur rural

region (DRR) exhibited a more diversified employment structure with a much lower proportion of agricultural activity and a higher proportion of non-household manufacturing and tertiary activities in total employment (Tables 13 and 14).

(ii) Urban influence was observed roughly up to the distance of 20 km, particularly with respect to the employment aspects; but beyond the distance group 15-20 km, it faded out. Since 20 km is the commuting distance, it implies that the favourable impact on the employment of the rural region took place mainly through commutation.

(iii) Urban impact on Durgapur in terms of the socio-economic indicators was quite limited. However, the figures indicated, that :

(a) density per sq. km and the literacy ratio exhibited by all the distance groups of Group B were higher than the sub-divisional average, which implied existence of urban influence.

(b) Gender-distribution of the Group A villages of Durgapur exhibited a tendency toward male-domination, which is a special feature of a region characterised by the pre-dominance of non-household manufacturing and also mining activities. The impact of the latter was also noticed in other spheres which will be discussed later.

(iv) Correlation co-efficients (Table 15) calculated between urban impact and the distance from the town indicated the following :

(a) 'r' values were significantly high when calculated for the percentage share of the agricultural sector and of the non-household manufacturing in total employment. The former was observed to increase with increasing distance showing a positive value of 'r', while the latter was observed to decline with increasing distance, showing a negative value of 'r'.

(b) High 'r' values were obtained for the Group B villages regarding percentage share of tertiary employment, density per sq. km and sex-ratio. Percentage of tertiary workers and density declined with increasing distance ('r' being negative), and percentage of female to male population increased with increasing distance ('r' being positive).

Values of 'r' calculated in the above variables for the Group A villages were not significant. Attempts were made to explain this in terms of factors other than urban influence. At least two such factors

could be located. One of these factors was the existence of pockets with mining activities. Thus, the percentage of mining employment in the distance group 5-10 km was 9.8% whereas the similar percentage in other distance groups was about 1%. High percentage of mining activity in a particular area implied low percentage of agricultural workers, high density and male domination in the gender-ratio

Good communication facility in some distant village groups (e.g. in groups 10-15 km, 15-20 km in Group A) pushed up density of population, percentage of tertiary employment and percentage of males in total population despite distance. Index of communication facility (measured by the percentage of village population enjoying facility of pucca road to total population in a particular distance group) was observed to be quite high in the above two village groups (49% and 55% respectively) in relation to the other distance groups. Good communication facility enabled the workers to get factory jobs and tertiary sector employment.

It is presumed that due to the existence of these exogenous forces, urban influence was to some extent offset, resulting in low values of 'r'.

(c) Moderate values of 'r' were obtained in the 'WPR (F)' for both the groups indicating positive correlation, though weak. Positive value of 'r' implied that with increasing distance agricultural employment also increased, providing greater scope of employment for the female workers.

Summary and conclusion

The study aimed at an understanding of the nature of the growth process in some of the major steel towns of India, particularly Durgapur. Attempt was also made to examine the impact of a particular town on the economic and demographic aspects of the local surrounding region. The steel towns exhibit some special features which distinguish them from other types of towns. The steel towns have passed through some distinct stages in their growth process, and some of them have reached a mature stage of growth while others have not. A close study of these towns indicates that the future growth rate of these towns would depend upon the integration of the core sector with the subsidiary and supplementary activities in the manufacturing and non-manufacturing sector.

Regarding the spatial impact of a particular steel town on the surrounding region, it was observed :

- (i) the impact was transmitted to the nearby rural areas mainly through generation of employment in non-agricultural activity,
- (ii) the beneficial effect on the rural occupational structure was mainly the result of commutation, and
- (iii) urban impact was observed to decline with distance from the town.

These observations verify the two hypotheses formulated above.

A more detailed analysis of the nature of urban impact would require further information about the degree and nature of non-agricultural economic activities in the local rural region. It would also require inter-temporal analysis of urban impact without which the study will remain incomplete. These issues are, however, outside the scope of the present study.

Table 1
Estimated Production of pig-iron and steel ingot in TISCO
Jamshedpur ('000 tons)

| Year | Production of pig-iron | Production of Steel ingot |
|---------|------------------------|---------------------------|
| (1) | (2) | (3) |
| 1915 | 160 | 125 |
| 1925 | 600 | 500 |
| 1940 | 1,200 | 1,100 |
| 1955 | 1,200 | 1,100 |
| 1960 | 1,600 | 1,650 |
| 1964 | 1,800 | 2,000 |
| 1970-71 | Not Available | 1,716 |
| 1975-76 | Not Available | 1,787 |
| 1980-81 | Not Available | 1,874 |

Sources : (1) M. Dutta, *Jamshedpur; The Growth of the City and its Region*, Calcutta, Asiatic Society, 1971; p. 121.

(2) Steel Authority of India; *Annual Report* (various issues).

Table 2
Growth of Factory Employment in Jamshedpur

| Name of the Company | Year of Establishment | Persons employed (As on March 1975) |
|--|-----------------------|-------------------------------------|
| (1) | (2) | (3) |
| TISCO Ltd. | 1907 | 40,000 |
| Tinplate Co. of India Ltd. | 1920 | 4,500 |
| Indian Cable Co. Ltd. | 1920 | 1,600 |
| Indian Steel and Wire Product Co. Ltd. | 1935 | 2,200 |
| The Jamshedpur Eng. and Manufacturing Co. Ltd. | 1926 | 500 |
| The Tata Foundry Co. Ltd. | 1927 | 3,000 |

Table 2 (Continued)

| (1) | (2) | (3) |
|---------------------------------------|------|-------|
| The Indian Hume Pipe Co. Ltd. | 1926 | 125 |
| The Tata Locomotive Eng. Co. Ltd. | 1921 | 4,600 |
| The National Metallurgical Laboratory | 1948 | 275 |

Source : B. R. Misra, *Report on Socio Economic Survey of Jamshedpur City*. Patna, 1959.

Table 3

Growth of Population in Jamshedpur Town, 1911-1981.

| Year | Population | Percentage change of population |
|------|------------|---------------------------------|
| 1911 | 5,672 | Not Available |
| 1921 | 57,360 | 1070.00 |
| 1931 | 92,459 | 61.20 |
| 1941 | 1,65,395 | 78.89 |
| 1951 | 2,18,162 | 31.90 |
| 1961 | 2,91,791 | 33.75 |
| 1971 | 3,41,576 | 17.10 |
| 1981 | 4,38,781 | 28.46 |

Source : Census of India (Reports of various years,)

Table 4
Migration to Jamshedpur Town till 1955

| Period of migration | Number of migrating families | Percentage of migrating families |
|---------------------|------------------------------|----------------------------------|
| Before 1940 | 1295 | 54.69 |
| 1940-41 | 163 | 6.88 |
| 1942-43 | 158 | 6.68 |
| 1944-45 | 115 | 4.86 |
| 1946-47 | 135 | 5.70 |
| 1948-49 | 98 | 4.13 |
| 1950-51 | 98 | 4.13 |
| 1952-53 | 101 | 4.26 |
| 1954-55 | 55 | 2.32 |
| born in city | 150 | 6.35 |
| Total | 2,365 | 100.00 |

Source : B. R. Misra, : *Report on Socio Economic Survey on Jamshedpur*; Patna, 1959. p. 69.

Table 5
Growth of Manufacturing Employment in Durgapur, 1960-1981

| Year | Employment |
|------|------------|
| (1) | (2) |
| 1960 | 15,785 |
| 1965 | 16,620 |
| 1970 | 32,578 |
| 1975 | 35,527 |
| 1981 | 38,046 |

Sources: 1. Central Statistical Organisation, *Annual Survey of Industries*, (relevant years).
2. Data collected from the Inspectorate of Registered Factories, Govt. of West Bengal.

Table 6
Migration to Durgapur Town, 1950-1975

| Year | Percentage of migrants |
|-----------|------------------------|
| (1) | (2) |
| 1951-1956 | 3.57 |
| 1957-1960 | 18.62 |
| 1961-1964 | 56.43 |
| 1965-1969 | 15.00 |
| 1970-1975 | 6.38 |
| Total | 100.00 |

Source S. Sen, "Turnover Migration : the Case of Durgapur", paper presented at the Conference on Rural-Urban Relationship; Centre for Urban Economic Studies, Department of Economics, Calcutta University, 1983.

Table 7

Annual Average Growth Rates of Population, Workers and Non-workers in the Steel Towns, 1961-1981

| Towns/States (only urban) | | Durgapur | West Bengal | Jamshedpur | Bokaro | Bihar | Bhilai | M.P. | Rourkela | Orissa |
|---------------------------|--|----------|-------------|------------|--------|-------|--------|------|----------|--------|
| <i>1961-1971</i> | | | | | | | | | | |
| Growth rates (percent) | | | | | | | | | | |
| Population | | 39.56 | 2.84 | 1.71 | - | 4.40 | 8.57 | 4.66 | 9.11 | 6.63 |
| Workers | | 14.52 | 1.16 | 0.34 | - | 2.36 | 0.40 | 1.88 | 1.36 | 3.40 |
| Non-workers | | 81.23 | 3.73 | 2.88 | - | 5.39 | 19.23 | 6.14 | 19.14 | 6.83 |
| <i>1971-1981</i> | | | | | | | | | | |
| Growth rates (percent) | | | | | | | | | | |
| Population | | 5.09 | 3.16 | 2.83 | 13.50 | 5.44 | 8.14 | 5.60 | 8.63 | 6.80 |
| Workers | | 3.00 | 2.63 | 0.94 | 5.57 | 3.99 | 7.44 | 5.96 | 6.50 | 6.64 |
| Non-workers | | 15.85 | 3.20 | 3.59 | 20.46 | 5.88 | 8.46 | 5.29 | 9.50 | 6.60 |

Sources: 1. Census of India 1961, Vol. 16 (West Bengal and Sikkim), Vol. 4 (Bihar), Vol. 8 (Madhya Pradesh), Vol. 12 (Orissa), Pt II B (i), General Economic Tables.

2. Census of India 1971, Ser. 22 (West Bengal), Ser. 4 (Bihar), Ser. 10 (Madhya Pradesh), Ser. 16 (Orissa), Pt. II B (i), General Economic Tables.

3. Census of India 1981, Series 1 (India), Pt. II B (i), General Economic Tables.

Table 8
Changes in the gender-ratios of the Steel Towns, 1961-1981

| Females per 1,000 of males in towns/states (only urban) | | | | | | | |
|---|-----|----------|-------------|------------|--------|-------|-----------------------------|
| | | Durgapur | West Bengal | Jamshedpur | Bokaro | Bihar | Bhilai M.P. Rourkela Orissa |
| Year | | | | | | | |
| 1961 | 338 | 701 | 791 | — | 811 | 486 | 537 807 |
| 1971 | 764 | 751 | 799 | 644 | 807 | 795 | 748 845 |
| 1981 | 822 | 820 | 846 | 736 | 833 | 858 | 792 859 |

Source : Same as in Table 7.

Table 9
Age-distribution of Population in the Steel Towns, 1961-1971

| Age-distribution of population in the age-groups | | | | | | | |
|--|-------|----------|-------------|------------|--------|-------|-----------------------------|
| | | Durgapur | West Bengal | Jamshedpur | Bokaro | Bihar | Bhilai M.P. Rourkela Orissa |
| | | | | | | | |
| 0-14 | | | | | | | |
| 1961 | 21.23 | 34.82 | 39.92 | — | 39.86 | 24.99 | 25.04 35.30 |
| 1971 | 39.12 | 35.45 | 38.94 | 33.78 | 40.47 | 42.11 | 40.11 39.86 |
| 15-59 | | | | | | | |
| 1961 | 77.34 | 60.73 | 57.22 | — | 55.55 | 73.41 | 73.19 59.92 |
| 1971 | 57.66 | 59.55 | 57.45 | 63.39 | 54.86 | 56.02 | 57.79 55.54 |
| 60 and above | | | | | | | |
| 1961 | 1.43 | 4.45 | 2.82 | — | 4.59 | 1.44 | 1.68 4.71 |
| 1971 | 3.20 | 5.00 | 3.61 | 2.83 | 4.66 | 1.86 | 2.06 4.60 |

Source : Same as in Table 7.

Table 10

Changes in the Dependency Ratios and Work Participation Rates in the Steel Towns, 1961-1981

| Towns/States (urban) | Durgapur | West Bengal | Jamshedpur | Bokaro | Bihar Bhilai | M.P. | Rourkela | Orissa |
|---|----------|-------------|------------|--------|--------------|-------|----------|--------|
| <i>Year</i> | | | | | | | | |
| Dependency Ratio | | | | | | | | |
| 1961 | 37.54 | 65.34 | 67.46 | - | 66.78 | 43.37 | 65.06 | 43.15 |
| 1971 | 69.10 | 69.88 | 71.48 | 55.53 | 71.70 | 68.52 | 71.90 | 66.46 |
| 1981 | 73.35 | 71.11 | 75.69 | 70.95 | 74.35 | 69.72 | 71.26 | 70.30 |
| Work-participation Rate for Male (all ages) | | | | | | | | |
| 1961 | 80.30 | 55.35 | 51.80 | - | 51.73 | 77.35 | 52.44 | 75.85 |
| 1971 | 51.77 | 49.80 | 47.44 | 64.89 | 47.48 | 52.59 | 46.17 | 54.43 |
| 1981 | 46.41 | 48.44 | 41.04 | 47.47 | 43.52 | 48.63 | 46.70 | 48.86 |
| Work-participation Rate for Male (between age group, 15-59) | | | | | | | | |
| 1961 | 94.71 | 80.82 | 82.59 | - | 81.90 | 95.47 | 85.50 | 93.43 |
| 1971 | 82.11 | 74.58 | 76.21 | 90.17 | 76.36 | 87.39 | 78.15 | 93.59 |
| 1981 | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |

N.A. denotes 'not available'

Sources : Same as in Table 7.

Table 11

**Changes in the occupational pattern of the steel towns during
1961-1971**

| Towns | Jamshedpur | | Durgapur | | Bhilai | | Rourkela | |
|----------------------------|------------|--------|----------|--------|--------|--------|----------|--------|
| | 1961 | 1971 | 1961 | 1971 | 1961 | 1971 | 1961 | 1971 |
| Occupational groups | | | | | | | | |
| Primary | 1.93 | 1.96 | — | 8.45 | 4.27 | 2.78 | 2.99 | 3.69 |
| Construction | 7.08 | 3.93 | 24.40 | 4.25 | 17.09 | 4.93 | 9.75 | 1.34 |
| Manufacturing | 57.97 | 62.36 | 59.00 | 56.00 | 52.29 | 59.41 | 36.38 | 34.00 |
| Tertiary : | 33.02 | 31.75 | 16.87 | 31.29 | 26.35 | 32.88 | 50.88 | 60.97 |
| of which | | | | | | | | |
| trade commerce & transport | 11.14 | 16.43 | 3.51 | 12.60 | 12.20 | 16.98 | 17.60 | 26.67 |
| Service | 21.88 | 15.32 | 13.36 | 18.69 | 14.15 | 15.90 | 33.28 | 34.30 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

- Sources : 1. Census of India 1961. District Census Handbooks (of respective states)
2. Census of India 1971. District Census Handbooks (of respective states).

Table 12

Occupational changes in the steel towns, 1971-1981

| Towns/ States (u) | Percentage share of occupation groups | | | | | | | |
|----------------------|---------------------------------------|------|----------------------------|------|---------------|------|---------------|-------|
| | Agriculture | | Household manufacturing | | Other Workers | | Total Workers | |
| | 1971 | 1981 | 1971 | 1981 | 1971 | 1981 | 1971 | 1981 |
| Durgapur | 7.2 | 4.8 | 1.5 | 1.9 | 91.3 | 93.3 | 100.0 | 100.0 |
| West Bengal | 4.5 | 4.3 | 2.9 | 3.4 | 92.6 | 92.3 | 100.0 | 100.0 |
| Jamshedpur | 1.2 | 0.4 | 1.0 | 1.0 | 98.7 | 98.6 | 100.0 | 100.0 |
| Bokaro | 21.6 | 5.4 | 1.4 | 0.6 | 77.0 | 94.0 | 100.0 | 100.0 |
| Bihar | 18.9 | 16.6 | 4.7 | 3.3 | 76.4 | 80.1 | 100.0 | 100.0 |
| Bhilai | 1.6 | 1.2 | 1.5 | 1.1 | 96.9 | 97.7 | 100.0 | 100.0 |
| Madhya Pradesh | 12.4 | 13.6 | 7.0 | 6.2 | 80.6 | 80.1 | 100.0 | 100.0 |
| Rourkela | 1.8 | 1.8 | 0.6 | 1.4 | 97.6 | 96.8 | 100.0 | 100.0 |
| Orissa | 14.5 | 15.2 | 4.1 | 3.6 | 81.4 | 81.1 | 100.0 | 100.0 |

- Sources : 1. Census of India 1971. District Census Handbooks (of respective States).
2. Census of India 1981. Ser. 1 (India), Pt. II B (i) General Economic Tables.

Table 13

Selected variables representing impact of Durgapur industrial town on the surrounding rural region : Group A villages (Bankura district)

| Variables | Distance (Km.) | 0-5 | 5-10 | 10-15 | 15-20 | 20-35 | Total Durgapur (rural) | Burdwan district† (rural) |
|---|-------------------|------|------|-------|-------|-------|---------------------------|---------------------------------|
| I. Economic Characteristics. (percentage) | | | | | | | | |
| 1. Agricultural workers to total workers | | 63.0 | 52.5 | 61.2 | 58.0 | 78.1 | 61.2 | 81.7 |
| 2. Workers in non-household manufacturing to total workers | | 14.5 | 11.9 | 10.7 | 12.9 | 2.4 | 10.5 | 2.8 |
| 3. Workers in household manufacturing to total workers | | 2.3 | 4.1 | 1.6 | 1.4 | 0.5 | 2.1 | 2.2 |
| 4. Workers in tertiary activities to total workers of which | | 14.9 | 15.0 | 20.5 | 21.1 | 14.2 | 16.8 | 11.0 |
| a) Workers in trade transport | | 6.8 | 7.3 | 12.1 | 12.2 | 2.4 | 7.9 | 4.4 |
| b) Service sector workers | | 8.1 | 7.7 | 8.4 | 8.9 | 11.8 | 8.9 | 6.5 |
| II. Socio-economic characteristics. | | | | | | | | |
| 5. W.P.R. (M) | | 46.2 | 46.1 | 47.9 | 50.1 | 48.5 | 47.6 | 47.1 |
| 6. W.P.R. (F) | | 3.5 | 6.6 | 7.9 | 8.4 | 6.1 | 6.3 | 5.5 |
| 7. Gender-ratio | | 956 | 913 | 929 | 870 | 954 | 924 | 963 |
| 8. Density per sq. km. | | 365 | 338 | 240 | 399 | 285 | 323 | 410 |
| 9. Literacy ratio | | 27.7 | 31.5 | 32.0 | 30.7 | 25.9 | 29.4 | 29.8 |

† Asansol subdivision and Andal police station, being predominantly mining regions, have been excluded from the district figures.

Source : Census of India, *Primary Census Abstract, District Census Handbook (Burdwan), Calcutta, 1971.*

Table 14

Selected variables representing impact of Durgapur industrial town on the surrounding rural region : Group B villages (Bankura district)

| Variables | Distance (Km.) | | | | Total Subdivi- DRR sional average | |
|--|-------------------|-------|-------|-------|---|------|
| (1) | 0-10 | 10-15 | 15-20 | 20-35 | (6) | (7) |
| I. Economic Charac- teristics (Percentage) | | | | | | |
| 1. Agricultural workers to total workers | 59.3 | 74.0 | 79.5 | 83.4 | 75.5 | 85.8 |
| 2. Workers in non- household manu- facturing to total workers | 7.8 | 4.5 | 5.0 | 3.7 | 5.0 | 2.2 |
| 3. Workers in household manu- facturing to total workers | 6.4 | 8.8 | 4.8 | 5.5 | 6.4 | 3.2 |
| 4. Workers in ter- tiary activities to total workers | 26.0 | 14.5 | 7.8 | 6.8 | 12.2 | 8.1 |
| <i>of which</i> | | | | | | |
| a) Workers in trade-trans | 5.4 | 4.3 | 2.5 | 2.0 | 3.4 | 1.7 |
| b) Service sector workers | 20.6 | 10.2 | 5.3 | 4.8 | 8.8 | 5.7 |
| II. Socio-economic Characteristics : | | | | | | |
| 5. W.P.R. (M) | 46.6 | 46.6 | 41.3 | 46.8 | 45.2 | 48.9 |
| 6. W.P.R. (F) | 1.6 | 5.9 | 15.6 | 6.9 | 8.2 | 10.0 |

Table 14 (Continued)

| | | | | | | |
|---------------------------|------|------|------|------|------|------|
| 7. Gender-ratio | 808 | 955 | 961 | 981 | 958 | 957 |
| 8. Density per sq. km. | 469 | 418 | 321 | 312 | 346 | 269 |
| 9. Literacy ratio | 25.3 | 30.1 | 26.4 | 26.1 | 27.2 | 24.4 |

N.B. : As the number of villages in the distance group 0-5 (km.) was very small, this was merged with the group 5-10 (km.) and reported as group, 0-10 (km.).

Source : Census of India, *Primary Census Abstract, District Census Handbook (Bankura)*, Calcutta, 1971.

Table 15

Correlation co-efficients calculated between selected indicators of urban impact and distance from the Durgapur town

| Indicators of urban impact. | Group A | Group B |
|--|---------|---------|
| Economic Characteristics | | |
| 1. Percentage of agricultural workers to total workers | 0.72 | 0.93 |
| 2. Percentage of workers in non-household manufacturing to total workers | -0.83 | -0.86 |
| 3. Percentage of tertiary workers to total workers | -0.70 | -0.90 |
| Socio-economic Characteristics | | |
| 4. Density (per square km.) | 0.29 | -0.92 |
| 5. Gender-ratio | | -0.84 |
| 6. W.P.R. (F) | 0.45 | 0.46 |

Source : Census of India, *Primary Census Abstract, District Census Handbook (Bankura)*, Calcutta, 1971.

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PROBLEMS AND POSSIBILITIES OF MUNICIPAL DEVELOPMENT — A CASE STUDY OF BISHNUPUR

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I Introduction

In a developing country like ours, municipalities have two major roles to perform : first, to provide local public goods, especially those which the poorer people cannot afford to purchase otherwise, and second, to remove regional disparities in the growth of urban facilities so as to effectively check the vast drainage of human and other resources from rural and semi-urban areas to urban centers. The purpose of this paper is to examine these roles of the Bishnupur Municipality in the light of the secondary data available from the municipal authorities and primary data collected through household interviews during September-October, 1981. The analysis emphasizes the importance of transaction costs (See, for example, Alchian and Demsetz (1972), Cheung (1969), Jensen and Meckling (1976)) in the study of institutional changes.

Generally, the activities and plans of many municipalities, not unlike other institutions, are designed and implemented under strong influences of certain traditional interest groups. As a result, these municipalities have virtually been degenerated into instruments for giving away some benefits or taking away some money in favour of small interest groups¹. It is the premise of this paper that, if these municipalities are to meaningfully perform the tasks stated at the beginning, they must work in the spirit of communes, invite tremendous amount of active participation of general people in designing and supervision of programmes and alter the social

equations as well as the relations of production by actively participating in the production process. Although, the major results of this paper have been derived from the study of a single municipal area, necessary support from the experience and functioning of the other two municipalities in the district has been provided whenever such data have been available to the authors.

The paper proceeds as follows : The next section provides the basic information about the municipality, its administrative structure, activities and some idea about the occupational class character of its past Chairmen and commissioners. Section 3 describes and analyses the various sources of municipal earnings e.g., from the collection of holding rates, license fees and market charges (i.e., tolls). Section 4 describes and tries to unveil the rationale behind the current expenditure pattern of the municipality. As no meaningful plan for municipal development can be drawn without the knowledge of the socio-economic positions of its inhabitants, Section 5 describes and analyses the various socio-economic data available from Census reports and those collected through a sample study of households belonging to this municipal area. The final section sums up the major policy conclusions of this paper.

II The Nature and Structure of the Municipal Administration

Bishnupur, previously the capital city of the Mallah Kings, came under municipal administration as early as in September 1st 1873. Before the passing of the B.M. Act 1932, it was administered by nominated Chairmen most of whom were entrusted with the task of assimilating the interests of the British with those of locally powerful groups. At present the municipality has a total area of 22.01 square kilometers, an estimated population of 47,482 and 7,373 holdings, and is administered by 16 elected Commissioners, each representing a ward within the municipal constituency. The Commissioners provide free services to the community².

It can be seen from Chart I, that the major activities of this municipality centre around sanitation and public works. These activities are supported administratively by a general department and a collection department through earning of revenues. At present the municipal activities are designed and supervised by various standing committees and by the Board of Commissioners, in general. The staff positions in each department are indicated in this chart so as to allow comparability with other municipalities, and it also draws the special attention of the relevant authorities to the

need for additional personnel as strongly voiced by a young group of the employees.

Before evaluating the activities of this municipality from historical records, it is important to give some idea about the occupational class character of its previous Chairmen and commissioners of this municipality. It can be seen from Table 1 that, until very recently and over the period for which data are available, the position of the Chairman has always been represented by a member of one of these four dominant professions and classes : doctors, pleaders, owners of 'big' business and landowners. The first three groups have always been present in a significant way in the Board of Commissioners, although doctors and pleaders seem to be gradually losing control over the Board and owners of big business are getting used to sharing of power with the newly emerging intermediate classes : owners of 'medium-size' business, contractors, social-workers, school-teachers and sometimes other service holders of high and medium category. This sharing of power by the 'big' business and absence of landed interests in the Board do not necessarily mean considerable diminution of the strength and influence of these dominant classes. This is because, over time, and as expected, the landowning class is likely to have mingled with other classes, whereas the business groups are alleged to have quite innocently sent their loyal employees to the Board on several occasions to represent and safeguard their interests. Anyway, because of this class orientation of the people who have controlled the municipality, they would serve at best the interests of immediate income classes, as it can be seen in the later part of this study.

III The Income Side

The total income position of the Bishnupur municipality as well as its sources of income have been pictured in Table 2a, where it can be seen that between 1975-76 and 1979-80, except for item D, which represents Grants and Contributions, all other sources of income have gradually lost their relative significance, leaving the municipality at the mercy of the higher authorities for availability of funds. This is most likely to have been accompanied by the loss of municipal freedom in deciding and implementing its own plans and programmes; and this trend, if allowed to continue, may even lead to a complete erosion of the basic objectives of a decentralized local body. Over this period, the percentage increase in grants and contributions (447.7%) has outstripped the relatively moderate

figures for the last two items (257.41% and 162.7% respectively) and almost negligible figures for the first three (11.72%, 12.33% and 9.97% respectively) sources of income. In order to enable comparison across municipalities, the corresponding figures for Bankura and Sonamukhi municipalities, which belong to the same district, have been presented in the Tables 2b and 2c respectively.

In the situation where the performance of the collection side is miserable but major development projects have been undertaken whose cost by any means cannot be covered by municipal revenue collections, heavy dependence on outside fund is inevitable. Even though this may be justified as a device for closing the gap in the growth of interregional urban facilities, it should be remembered that, in a situation, where the urban facilities are growing at a faster rate in Calcutta Metropolitan area than in other areas, the process may have questionable value, and instead of closing interregional gap of urban facilities, the process may generate simply a 'race' between competing urban groups for appropriating funds from the Government.

For closer examination of the dismal picture of the municipal revenue earning, consider first, Table 3a (Tables 3b and 3c are counterpart of Table 3a for Bankura and Sonamukhi respectively). From Table 3a the following observation can be made : (i) Except for 1979-80, arrear demand has been greater than current demand; this is true irrespective of whether one considers the gross picture (row : 1-3) or the net picture (row : 7-9), (ii) the probability of getting remission on arrear demand (measured by the row 13) is almost always greater than that of current demand (measured by the row-14). Further, on many occasions even after this huge remission, the municipality's capability of realizing arrear demand is lower than that of realizing current demand (see rows 16 and 17). This would mean that the optimal policy for an 'intelligent' taxpayer would be to avoid payment in time, to convert current demand into arrear demand and thus to enjoy greater percentage remission, at the first step and then, if cost of being detected is not too great, to ignore tax-payments altogether at the next step. (iii) As a consequence, tax collection has never been fifty percent of the total demand, and in fact, this percentage is getting lower in recent years. The entire process seems to be a big mockery of tax-collection³. Almost similar statements could be made about Table 4.

Mainly two factors are responsible for this poor state of affairs. First, the economic condition of a large section of masses, namely

the artisans and craftsmen are miserable. A considerable number of holdings do not have any ability to pay taxes. The slum-dwellers remain completely outside the scope of any rate collection⁴. As a result, the tax base is very narrow. Second, even the insufficient number of rate collectors who are there, lack incentives for detecting the defaulters, punishments are too soft and due to long and cumbersome legal procedures, the cost of enforcing those punishments are practically prohibitive. In case of trade licence fees, there are two additional problems. First, the trade licences are at present divided into three categories : general trade, food trade and dangerous trade, the first being supervised by a clerk in the collection department and the rest by another in the sanitation department. If one goes through the lists of such trade licences (given in Tables 5a, 5b and 5c), one would find considerable overlapping of items. This has created confusion and complicated the enforcement of laws. Second, in the legal provision of the B.M. Act 1932 and its successive amendments, it is not sufficiently clear how many licences should be issued to a trader who deals in several items. The collection of licence fees from owners and pullers of rickshaws, carts and vans is no less discouraging.

We now turn to the assessment records of holdings. The authors had purposively picked three important wards of this municipality from which one percent of holdings (16 in number) were drawn at random to study the changes in the nature of holdings, in their annual values and quarterly tax rates over the last three assesment years. As one would expect, each holding is so different from each other in terms of composition and age, that there is no easy way of ascertaining whether one holding is favoured compared to the other by the assessor. Instead of trying to decompose and identify the various components of a holding in a scientific way and then apply suitable differential rate on various components, descriptive methods have been used to explain the nature of holdings, thus leaving the task of assessing the value of holdings to the mercy and generosity of highly paid assessors. In quite a few cases within the sample holdings, the annual value of holding has gone down over time even though there have been no apparent changes in the nature of those holdings (which are sometimes vacant plots of land); in a few others, the tax liabilities have gone down even though the annual value has increased or remained unchanged and there has been no apparent change in the nature of such holdings. In this kind of situation, it is, therefore, not surprising that the final annual value

of an average municipal holding (i.e., value assigned after general/partial revisions following appeals) would fall from Rs. 419.02 in 1976-77 to Rs. 405.11 in 1979-80. (Source : Questionnaire of the Municipal Finance Commission of the Government of West Bengal 1980, Table IV, obtained from the Municipal authority).

Collection of tolls from market areas and rent from the municipality's commercial establishments represent two other sources of municipal revenues. However, the collection of tolls has suffered from the following problems. A number of markets (five in all) have been in existence for quite some time in various parts of the towns⁵. Tolls are raised everyday in these markets. But there is question of maintenance of accounts and audit. It is stated that the 'small sum', thus collected, is utilized to meet the expenses of local community festivals. The locally powerful elements (very often with direct or indirect consent of the local commissioners) purchase goodwill by 'free' service to the community in these matters and the poor municipality gratuitously bears the burden of loss in this potential revenue. Right now the municipality collects tolls from the main market with the help of its own employees; however, we have been told by the authorities that this has been a liability for the municipality for some time. If this means financial loss to the municipality and the authorities do not like the idea of income redistribution in favour of its present beneficiaries, the best way to get rid of this problem is to change the form of the contractual arrangement by leasing it out for a fixed sum of money. Even free provision of this marketing facility would reduce the size of loss of the municipal authorities.

At present there are several commercial establishments and the municipality is in favour of multiplying their numbers. There are two types of problems in this matter. First, construction of new commercial complexes requires help of contractors, which again, requires a sharp redistribution of income in favour of this group. Second, unless the municipality can flood the market with new commercial establishments, the official tenants of such commercial establishments would be able to realize huge scarcity rent by subleasing the facilities. The authors encountered one interesting case during their field-studies where the unofficial subtenant pays Rs. 400 per month for the establishment, whereas the official tenant of the municipality pays only Rs. 40 per month⁶. Clearly, this state of affairs follows from unequal information and unequal access to the market for leases of various social groups in the community.

IV The Expenditure Side

The detail of the municipal expenses of Bishnupur is provided in Table 7a. (Table 7b and 7c provide its counterparts for the other two municipalities). It can be seen from this Table that, between 1975-76 and 1980-81, the expenditure on wages has gone down in relative terms and in absolute terms it has registered two-fold increase whereas recurring expenditures have increased more than two folds and non-recurring ones more than ten-folds. This is understandable in view of recent construction of social overheads capital in this area. If one looks at the alternative break-up of expenses, one observes that whereas in 1975-76, the relative ranking of the major items of expenditure were public instructions conservancy, tax-collection, extraordinary expenses, roads, public health, general administration and lighting in order of importance, in 1980-81 the ranking are public instructions roads, public health, tax-collection, extraordinary expenditure, conservancy and drainage. In absolute terms, expenditure on roads have increased about 14 times between 1975-76 and 1980-81, those on loan repayments about 8 times, on drainage about 5 times and water supply about 4 times. In view of the above findings, one can conclude that the items of expenditure which have received special attention of the municipal authorities are public education, roads, public health, drainage, loan repayment and water supply. Although no precise quantitative data are available to indicate how the general people gained from this scheme of expenditures, several important observations could be made on the basis of the authors' experience during field-study of this municipal area :

(i) No doubt, large scale centralized schemes, if properly run and maintained, enjoy economies of scale, look sophisticated and gorgeous in commonly accepted western standards; and as such, these schemes are popular too. However, as these schemes require tremendous amount of team work among the heterogeneous groups of input suppliers; and moreover, as the general people have no easy way to supervise these complex schemes, the transaction costs of constructing and running such schemes are often awfully high, especially in a class society where the conflict of interests among various heterogeneous groups is intensifying over time and the power of the authorities to mediate and assimilate the interests of various fighting groups is rapidly waning. If one closely examines the 'story' behind the lengthy process of construction of tap water

facilities in the Bishnupur Municipal area, one would get a perfect understanding of the problem⁷. Even after this scheme is completed, the general people would have no easy way of ensuring that the water supplies would be regular and free of pollution. The well-off section would easily be able to subscribe for the municipal water supply, beside maintaining an alternative source of supply of water and can also purchase purifiers to avoid the hazards of polluted water. This is not possible, for example, for the slum dwellers. The authors are not recommending scrapping of the existing plan of tap water facilities, but, as a matter of policy, it must be stressed that such plans are often inappropriate products for the present stage of development of the society; and small, decentralized schemes like digging of a few ring wells in the poor areas could have served the purpose at a considerably lower cost.

(ii) Although a great deal of emphasis has been placed on the provision of free primary education in recent years, three major problems are impeding the success of this scheme : i) after the supersession of the private school management committees, the municipal commissionners are yet to adjust themselves to the new set of responsibilities (mainly supervision) entrusted upon them. ii) The neo-rich class, mostly service-holders and businessmen, are sending their kids to the more sophisticated schools and/or are supplementing free primary education with greater and greater doses of private coaching by the same school teachers (although forbidden by law), thus making learning at school a matter of secondary importance.

(iii) Due to inadequate development of means of living of the poorest section of people (e.g., slum-dwellers) in a market economy, these classes of people are still keeping their children (especially, girls) engaged in the production of home goods and collection of various non-market goods. Although, the absolute number of scheduled caste and schedules tribe students has shown slight increase over the last few years, the percentage of female students is still considerably lagging behind that of the male students. On the other hand, the school teachers emphasize on the inadequate supply of funds for building construction, repair work, purchase of durable goods, lack of recreational facilities for the students and inadequate as well as irregular supply of books, tiffin and other reading materials as their basic problems at the present moment.

(iv) No doubt, the municipalities are spending a significant fraction of resources on construction of roads and especially sanita-

tion, public health and conservancy, unfortunately these resources have hardly been used in a manner to meet the needs of the poorest section of the community. During their field-work, the authors have seen how the socially powerful elements continuously clamour for construction of municipal drains and 'pucca' roads around their places of residence. Development is very often a job of choosing the right set of priorities. To the present authors, cementing the surface of relatively unimportant ('kutchra') roads seems less important than constructing a 'kutchra' approach road for the slum-dwellers or arranging some means of livelihood for the poorest class of people. A similar problem is there with respect to the provision of drainage facilities⁸. An even more shocking exercise would be to check the list of beneficiaries of municipal expenditure on latrine conversion facilities in recent years. The extent of municipal help of Rs. 1,200 per case is only one-third of the total cost of constructing a sanitary latrine. Naturally, only the socially most powerful elements have been able to take advantage of this facility. In our view, establishment of a few community latrines (with appropriate provisions for maintenance) should have received priority over conversion of existing manual latrines into sanitary ones.

V A Socio-economic study of the Bishnupur municipal area

It can be seen from the Census figures (Tables 8 and 9) that, unlike the district town of Bankura, which has received greater attention of the higher authorities in terms of availability of funds and facilities and where the population has grown steadily since 1901, the subdivision town of Bishnupur and the other towns of the district, namely Patrasaer and Sonamukhi, have experienced both periodic increases and decreases in the absolute sizes of their populations. It can be seen from the Table 9 that the population of Bishnupur contains a fairly high proportion of scheduled castes and tribes and an awfully large percentage of potentially unemployed people. Agriculture is rather unimportant; most of the working population earn their incomes from various household industries, trade, commerce, and government as well as quasi-government services⁹. Except for some spread of education for both genders, the picture has changed very little over the last decade.

Some ideas about the composition of trade, commerce and services as well as changes therein are obtained from Table 5a and 5b and 5c. From Table 5a it can be seen that the relatively traditional types of goods and services (represented by the first 13 rows of Table 5a) have declined in relative importance from 69.93% to 55.92%

between 1971 and 1981. Compared to Tables 5a and 5b, the composition of dangerous goods trade in Table 5c has changed relatively less. The items which have shown especially sharp rise in number in Table 5a and 5b are mostly modern goods and services (namely, husking and grinding, watch and radio shops, furniture and art products, coal dealers, tea dealers medical stores, contractors, modern confectionary, hotel and bakery and small informal sectors (namely, fruits and vegetables, petty trade vendors of fish, milk, sweetmeat etc.). This compositional change seems to have resulted from two main types of forces : change in tastes and preferences of people in favour of modern and more sophisticated goods and services, and change in income distribution of the large and broad middle income groups who have been the largest victim of the taste-preference change phenomenon. It is surprising to find out from all these three tables that some of the items (e.g., those for legal and medical practitioners) have registered decreases in absolute numbers.

As the secondary data source reported so far in this section do not offer any information about the in-migrants to this town or the traditional occupational groups of this place, the relevant information about these groups of people, which were collected through a sample survey and household interview, are presented below.

In order to collect information about the in-migrants to this town, a 5% sample was drawn at random from the list of households which have submitted plans for new construction to the municipal authorities over the last five years¹⁰. The available sample households have been classified into three distinct groups according to the place of residence of their last two generations. Detailed information about these groups are provided in the Table 10, where it can be seen that, whereas the artisans are most dominant in the groups of people who have been staying at Bishnupur for at least over the last two generations, service holders are most dominant among the village-to-Bishnupur migrants, and the service holders and business families are equally important within the third group of people who have migrated from some other town to Bishnupur. The craze for 'modern' consumer good is fairly high among all three groups, though it is higher among the last two. By all available standards the last group is most well off while the position of the second group is better compared to that of the first. Although the second group has shifted away more than others from their forefathers' occupations,

still this group has been most reluctant to sell off their cultivable lands and cut off all links with their villages of origin. Many of them have already established contacts with big cities both outside and inside of India through their children. The migration behaviour of this group of people seems to have two important features : first, they are migrating in stages, i.e., initially they are shifting their human resources and then at the next stage, they are gradually shifting their non-human assets; they are completing their migration process from remote villages to big cities over several generations, each generation moving at least one step ahead of its previous one.

We now provide below a summary of our findings from a micro-study of the traditional occupation groups of this area, which involve weavers, bell-metal workers, lantern makers, milkmen, carpenters, cobblers, fishermen, conchshell workers, potmakers, rickshaw pullers, slum-dwellers and also a small number of peasants belonging to the western part of the municipal area (namely Gopalpur).

The slum-dwellers are mostly Bauries, Bugdis, Domes and Hadis who seem to have some schedule caste/tribe origin and who have been living here for the past several generations in the homestead lands of either the Mallah kings or of some other powerful landed gentry. Many of them have their names already registered in the settlement records, while a few others are still living under fear of possible future eviction, especially if the owner of their lands sells the lands to a powerful agent. Right now, these people don't have any fixed occupation, most of them working as casual workers either in agriculture on daily wage basis or more frequently in local handicrafts at piece-rate wages. A large fraction of them are rickshaw-pullers, in many cases working side by side with the younger generation of their one-time employers, the artisans. Thanks to the high transactions costs of enforcing a rickshaw contract and a slightly liberal lending policy of local banks, many of the rickshaw-pullers have nowadays become owners of their rickshaws. As supervision costs are relatively low for unemployed/retired people, cycle repair shopowners and business people (who often use rickshaws for their own needs), ownership of rickshaws seems to be highly concentrated in their hands (see Table 6). Again, due to the phenomenon of economies of scale in supervision, there appears to be a high degree of concentration in the ownership pattern of rickshaws especially among the group of rickshaw owner-cum-pullers.

As noted earlier, the percentage of agriculturists is small in this region, almost all of them living in two adjacent small areas known as Gopalpur and Hakimdanga. Most of these people have some land of their own. For some time their major problem has been lack of irrigation facilities, which they previously used to get in ample amounts from the Yamuna bundh. Although these people have their irrigation rights already registered in the settlement records of the bundhs, this has lost its significance due to the decaying conditions of almost all bundhs. Due to property rights problems, development of fisheries is no more a profitable proposition to the owners of these bundhs. Their optimal policy is to allow these bundhs to be silted and very soon converted into easily saleable cultivable land. This process needs to be stopped without further delay in the interests of irrigation and fisheries development. Even if nothing could be done about these bundhs (including Yamuna) in the near future, the problem of the agriculturists at Gopalpur and Hakimdanga can still be solved by installing a lift irrigation facility from the nearby Birai river, which would enable production of three crops instead of only one at present each year on about 600 bigha plots of land.

The problem of the fishermen is closely related to the issue of development of fisheries in this area, especially in the existing big bundhs. Many of the fishermen have received modern training, but they lack either appropriate incentives or alternate financial support or both to apply their knowledge on others' property. At present almost all of them are working on others' ponds/tanks on a sharing system (less frequently at fixed cash rent) on a 50 : 50 basis, though these people provide all inputs of production. Their problems are very similar to those of sharecroppers on agricultural land. It is proper that these people should be offered facilities similar to those granted to the 'bargaders' by the present Government.

There is hardly any prospect for improving the condition of the earthen pot-makers, for the demand is extremely small, local and of a highly seasonal in character. Although the bell-metal and conch-shell workers have at present a fairly good demand for their products, their days too, especially of the former, seem to be numbered. However, as long as these two industries have strong demands, they should be helped to get out of the hands of monopoly elements and middlemen in the purchase of raw materials and in the sale of their output. Some alternations in the designs and variety of products and use of newer technologies may lengthen the lifetime of

the last two types of industries to some extent. Eventually, however, these people and the pot-makers need to be absorbed outside of their traditional professions through establishment of new and modern industries.

The vacant lands as well as the lands vested by the Settlement Department and handed over to the municipality are mostly located at the outskirts of this town. The cultivable plots should be distributed; first to the slum-dwellers who are willing to cultivate them. At the second stage, these should be distributed to milkmen for construction of 'khatahs' and, at the final stage, the rest should be given out for the construction of residential complexes with a view to reduce congestion in certain crowded areas of the town.

'Chhanameat' had been a major item of export of the Bishnupur municipal area. However, due to present irregularities of train services (passenger buses are obviously incapable of carrying 'chhanameat') the milkmen are facing serious problems. An alternative transportation system could be arranged by the municipal authorities to help out these people. The Bishnupur Industrial School, the rapidly dying parent-institution of the local engineering school, which was originally designed to devise modern technologies to fit the local needs, should be revitalized to popularize not only 'gobar gas plants' among the milkmen and other sections of the people, but also human night soil plants. The slum-dwellers, who are living under conditions of abject poverty, are most likely to accept these technologies first and popularize them. Of course, the slum-people should be helped out at the same time with various avenues of income-earning. Spreading the knowledge as well as necessary ingredients for poultry production may provide one quick solution to their problems.

The carpenters, cobblers and even the lantern-makers during days of the load-shedding have fairly good future prospects, provided their markets are extended and products are standardized through provision of modern but cheap technologies, for example, with the help of the local Industrial School. Due to high transaction costs problem, the banks are unwilling to provide loans to these small unorganized groups of artisans. This problem can be solved if the municipal authorities come forward and establish model factories using the local talents.

The weavers of this town are most numerous among the artisans. Traditionally, the weavers worked on silk, but nowadays quite a few

of them are working on rayon and cotton. Due to unequal access in the markets for raw materials, loans, final products and even the government agencies, which have been designed mainly to help these people, there has been a tremendous growth of middle-men and concentration of this business in this industry. Supply of modern designs from local sources (e.g., through the Industrial School), replacement of handlooms by powerlooms, establishment of a dying factory and a yarn reeling unit to supplement the functions of an already-existing cocoon-raising centre, linking of the actual producers of the famous 'Baluchari Sari' to final consumers (for example, through publicity in the local tourist lodge and distribution of pamphlets by the municipality) are some of the necessary steps for improving the lot of the weavers.

Bishnupur is also a very important marketing centre for a vast area of surrounding villages, only comparable to the marketing facilities at Bankura on the west side, Sonamukhi on the north, Arambagh on the east and Garbeta on the southern part of the district. Naturally, without development of cold-storage facilities at Bishnupur and arrangement of collective and formalized systems of marketing agricultural produce, the vast number of small agricultural producers in this area cannot be freed from the clutches of the intermediaries and middlemen. Development of a cheaper tourist centre and introduction of conducted travel tours around Bishnupur would strengthen the economy's position in several ways.

VI Conclusions

The authors firmly believe that for the future development of the municipalities, the following recommendations should be given serious consideration by the relevant authorities:

(i) For the real advancement of the people under its jurisdiction the municipality must alter the relation of production. For this purpose they should actively participate in the production not only in the traditional lines, using local talents, but also in new and modern lines by devising new technologies and updating old ones appropriately with the help of the local Industrial School. However, the municipality should not jump to various lines of production at one time.

(ii) All government and quasi-government funds for the development of this area must be spent through the municipality, for which the commissioners must be held responsible not merely to the higher authorities but also and more importantly, to the local people.

(iii) The accounts and records of the municipality must be maintained in a scientific and organized way, preferably with the help of an economic statistician, and must be reported to the local people at regular intervals in community meeting and local journals. Community meeting halls and a municipal journal should be created for this purpose. Major municipal decisions, accounts and notifications may also be displayed on municipal notice boards at various important places of the town. Above all, the municipalities must make themselves subjects of enquiry by academic and scientific people at regular intervals.

(iv) All necessary steps must be taken to make the municipalities self-supporting as far as possible and as soon as practicable to preserve the autonomy of these institutions. Regarding earning of revenues, municipalities must develop one assessment record for one family. Steeper rates of taxation must be imposed on families owning several buildings and land plots in the different names of family members within the same municipal area.

(v) In designing plans and programmes, the municipalities should give topmost priority to small decentralized schemes.

CHART 1

STRUCTURE OF THE PRESENT ADMINISTRATION OF BISHNUPUR MUNICIPALITY

Board of Commissioners
(16 for 16 wards)

| Departments | | | | |
|---|--|---|---|--|
| 1. Chairman 2. Vice Chairman (in charge of Collection and Sanitation Deptt.) 3. Standing Committees (Providing suggestions and opinion under amended B. M. Act. 1981) (i) Public Works (ii) Public Health and Sanitation (iii) Finance and Establishment (iv) Free Primary Schooling (v) Review of Assessment Records (Each Committee has five members from the Board of Commissioners) | Departments | | | |
| | A. General Department | B. Collection Department | C. Sanitation Deptt. | D. Public Works Deptt. |
| | 1. Head Clerk-cum-Accountant 2. Assistant-1 (Maintains Account) 3. Assistant-2 (does correspondence typing and filling job) 4. 1 Second Clerk (receives petitions, maintains registers of birth and death, accounts of petty expenses and does despatch work) 5. Store Clerk (takes care of stationary goods, cement, Kerosine oil etc.) | 1. 1 Collector-cum Cashier (Tax Daroga) 2. 8 Assistant Tax Darogas (each in charge of 2 wards) 3. 8 Tax Collecting Sarkars for 16 wards (in charge of collection, distribution of bills and warrants) | 1. 1 Inspector 2. 1 Assistant 3. 2 Vaccinators 4. 4 Supervisors assisted by one tractor driver, one nightman, 6. annual workers and 9 casual workers | 1. 1 Overseer (looks after development works, building plans, encroachment problems etc.) 2. 1 Road Sarkar 3. 1 Tubewell Mistr |

Source : Bishnupur Municipality.

Table 1
Occupational Class Structure of Previous Chairman and Commissioners of Bishnupur Municipality

| Occupational Groups | Time Period | Chairmen | C o m m i s s i o n e r s | | | | | | |
|------------------------------------|-------------|----------|---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | | 1916-1981 | 1947-1951 | 1951-1953 | 1955-1961 | 1961-1965 | 1965-1969 | 1969-1981 |
| Doctors | | 4 | 2 | - | 3 | 3 | 2 | 1 | |
| Pleaders | | 9 | - | - | 2 | 2 | 2 | 1 | |
| Owners of Big Business | | 3 | 1 | - | 3 | 3 | 5 | 4 | |
| Owners of Small Business | | - | - | - | - | - | - | - | |
| Land Owning Class | | 5 | 3 | 1 | - | - | - | - | |
| Owners' of Medium Size Business | | - | - | 3 | 2 | 2 | 4 | 7 | |
| Contractor | | - | 1 | 3 | - | - | - | - | |
| Social Worker | | - | - | - | 2 | 2 | 1 | - | |
| School Teacher | | - | - | - | - | - | 1 | 1 | |
| Other Service Holders ¹ | | - | 1 | 1 | - | - | - | 1 | |
| Other Service Holders ² | | - | - | 1 | - | - | - | 1 | |
| Other Service Holders | | - | - | - | - | - | 1 | 1 | |
| Total | | 21 | 8 | 9 | 12 | 12 | 16 | 16 | |

Notes : (1) The municipality was under supersession during 1953-1955. (2) There was another member in the Board of Commissioners for 1947-1951. Unfortunately his name and occupational information could not be obtained. (3) Small business employ only their owners; medium business employs 1-3 additional people, big business employs more than 3. (4) Other Service Holders¹ : includes top level supervisors; Other Service Holder² : includes medium level supervisors.

Source : Bishnupur Municipality.

Table 2 a
Sources of Income of the Bishnupur Municipality

₹

| Financial Year | 1975-76 | 1976-77 | 1977-78 | 1978-79 | 1979-80 |
|---|---------------------|---------------------|---------------------|--------------------|--------------------|
| Sources | | | | | |
| A. Receipts from Rates and Taxes of which : | 1,57,436 (19.44) | 1,74,125 (16.60) | 1,63,724 (13.49) | 1,64,757 (7.73) | 1,75,892 (5.32) |
| (i) Rates on Houses and Lands | 49,702 (6.14) | 54,976 (5.24) | 30,394 (2.50) | 54,572 (2.56) | 57,813 (1.75) |
| (ii) Water Rates | - | - | - | - | - |
| (iii) Lighting Rates | 23,816 (2.94) | 27,241 (2.60) | 25,760 (2.12) | - | - |
| (iv) Conservancy Rates | 64,928 (8.02) | 74,511 (7.11) | 69,981 (5.77) | - | - |
| (v) Taxes on Animals and Vehicles | 5,105 (0.63) | 4,319 (0.41) | 4,504 (0.37) | 4,584 (0.21) | 4,010 (0.21) |
| (vi) Taxes on Profession and Trades | 8,518 (1.05) | 7,864 (0.75) | 9,314 (0.77) | 7,453 (0.35) | 7,987 (0.25) |
| (vii) Warrant, Fees and Penalties | 114 (0.01) | 146 (0.01) | 66 (0.00) | 18 (0.00) | 82 (0.00) |
| (viii) Other Rates and Taxes | 5,253 (0.65) | 5,098 (0.49) | 3,705 (0.30) | 2,357 (0.11) | 3,324 (0.10) |

Table 2a (Continued)

| | | | | | |
|---------------------------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| B. Realization under special Act | 28,747 (3.55) | 31,035 (2.96) | 28,940 (2.39) | 30,708 (1.44) | 32,291 (0.98) |
| C. Revenues from Municipal Properties | 45,666 (5.64) | 64,328 (6.13) | 39,637 (3.26) | 45,458 (2.13) | 50,219 (1.52) |
| Total (A+B+C) | 231,849 (28.62) | 269,488 (25.70) | 232,301 (19.14) | 240,923 (11.31) | 258,402 (7.82) |
| D. Grants and Contribution of which : | 5,12,747 (63.31) | 7,00,631 (66.81) | 8,68,936 (71.62) | 17,44,581 (81.89) | 28,59,588 (86.53) |
| (i) Revenue Grants | 1,65,788 (20.47) | 3,12,295 (29.78) | 4,13,866 (34.11) | 3,93,474 (18.47) | 5,76,922 (17.46) |
| (ii) Capital Grants | 3,46,956 (42.84) | 3,88,336 (37.03) | 4,55,070 (37.51) | 13,51,107 (63.42) | 22,82,666 (69.07) |
| E. Miscellaneous | 15,923 (1.97) | 25,403 (2.42) | 29,714 (2.45) | 40,138 (1.84) | 56,910 (1.72) |
| F. Extra Ordinary Income | 49,419 (6.10) | 53,184 (5.07) | 82,384 (6.79) | 1,04,603 (4.91) | 1,29,826 (3.93) |
| Grand Total | 8,09,938 (100.00) | 10,48,706 (100.00) | 12,13,335 (100.00) | 21,30,245 (100.00) | 33,04,726 (100.00) |

Source : Bishnupur Municipality.

Table 2 a (i)
Annual Rate of Growth of Incomes, Bishnupur Municipality (percentages)

| Financial Year | 1975-76 | 1976-77 | 1977-78 | 1978-79 | 1979-80 |
|---------------------------------|---------|---------|---------|---------|---------|
| Sources | | | | | |
| Revenue Income (A + B + C) | - | 16.23 | -13.80 | 3.71 | 7.25 |
| Grants (D) | - | 36.64 | 24.02 | 100.77 | 63.91 |
| Total Income | - | 29.48 | 15.69 | 43.04 | 55.13 |
| Source : Bishnupur Municipality | | | | | |

Table 2 b
Sources of Income of Bankura Municipality

| Financial Year | 1975-1976 | 1976-1977 | 1977-1978 | 1978-1979 | 1979-1980 |
|---|---------------------|----------------------|----------------------|----------------------|----------------------|
| Sources | | | | | |
| A. Receipts from Rates and Taxes of which : | 9,32,664 (34.58) | 10,18,627 (32.44) | 10,15,369 (29.60) | 10,75,271 (20.49) | 16,09,510 (28.28) |
| (i) Taxes on houses and lands | 2,18,780 (8.11) | 2,45,699 (7.83) | 2,34,374 (6.83) | 2,50,620 (4.77) | 3,42,545 (6.02) |
| (ii) Water Rates | 2,36,465 (8.77) | 2,61,564 (8.33) | 2,73,058 (7.96) | 2,80,624 (5.35) | 3,87,015 (6.80) |

Table 2b (Continued)

| | | | | | |
|---|----------------------|----------------------|----------------------|----------------------|----------------------|
| (iii) Lighting Rates | 95,185 (3.53) | 1,03,531 (3.30) | 1,03,453 (3.02) | 1,09,108 (2.08) | 1,57,550 (2.77) |
| (iv) Conservancy Rates | 2,67,490 (9.92) | 2,80,549 (8.94) | 2,78,745 (8.12) | 2,92,606 (5.57) | 5,13,630 (9.03) |
| (v) Tax on Animals and Vehicles | 7,999 (0.30) | 9,914 (0.32) | 9,856 (0.29) | 11,176 (0.21) | 12,000 (0.21) |
| (vi) Taxes on Professions and Traders | 27,592 (1.02) | 35,388 (1.13) | 33,422 (0.97) | 44,226 (0.84) | 70,000 (1.23) |
| (vii) Warrant, Fees and Penalties | 275 (0.01) | 320 (0.01) | 234 (0.06) | 724 (0.01) | 500 (0.01) |
| (viii) Other Rates and Taxes | 78,878 (2.93) | 81,662 (2.60) | 82,227 (2.40) | 86,193 (1.64) | 1,26,270 (2.22) |
| B. Realization under special Act | 8,353 (0.31) | 10,224 (0.33) | 10,307 (0.30) | 12,591 (0.24) | 12,000 (0.21) |
| C. Revenue from Municipal Properties and other Powers | 64,114 (2.38) | 92,255 (2.94) | 91,823 (2.68) | 92,311 (1.76) | 1,06,000 (1.86) |
| Total (A+B+C) | 10,05,131 (37.27) | 11,21,106 (35.71) | 11,17,499 (32.58) | 11,80,173 (22.49) | 17,27,510 (30.35) |

Table 2b (Continued)

| | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| D. Grants and Contributions of which : | 16,27,915 (60.36) | 17,78,574 (56.65) | 21,91,379 (63.87) | 34,81,910 (66.34) | 32,31,500 (56.78) |
| (i) Revenue Grants | 5,47,190 (20.29) | 8,00,364 (25.49) | 10,49,049 (30.58) | 10,44,069 (19.89) | 13,90,000 (24.42) |
| (ii) Capital Grants | 10,80,725 (40.07) | 9,78,210 (31.16) | 11,42,330 (33.30) | 24,37,841 (46.44) | 18,41,500 (32.36) |
| E. Miscellaneous | 6,752 (0.25) | 32,215 (1.03) | 25,909 (0.76) | 45,697 (0.87) | 5,44,000 (9.56) |
| F. Extra-ordinary Incomes | 57,183 (2.12) | 2,07,856 (6.62) | 96,016 (2.80) | 5,41,215 (10.31) | 1,88,000 (3.30) |
| Grand Total | 26,96,981 (100.00) | 31,39,751 (100.00) | 34,30,803 (100.00) | 52,48,995 (100.00) | 56,91,000 (100.00) |

Note : Figure in parenthesis represents percentage to the Grand Total.

Source : Bankura Municipality.

Table 2 b (i)

Annual Rate of Growth of Incomes, Bankura Municipality (percentage)

| Financial Year Sources | 1975-1976 | 1976-1977 | 1977-1978 | 1978-1979 | 1979-1980 |
|------------------------|-----------|-----------|-----------|-----------|-----------|
| Revenue Income (A+B+C) | - | 11.54 | -0.32 | 5.61 | 46.38 |
| Grants (D) | - | 9.25 | 23.21 | 58.89 | -7.15 |
| Total Income | - | 16.42 | 9.27 | 53.00 | 8.42 |

Source : Bankura Municipality.

Table 2 c

Source of Income of Sonamukhi Municipality

| Financial Year Sources | 1975-76 | 1976-77 | 1977-78 | 1978-79 | 1979-80 |
|--|-------------------|-------------------|------------------|------------------|---------------------|
| A. Receipts from Rates and Taxes of which : | 94,496 (16.39) | 75,585 (10.93) | 48,371 (7.21) | 42,283 (2.95) | 1,89,967 (10.45) |
| (i) Taxes on Houses and Lands | 59,174 (10.26) | 46,758 (6.76) | 30,096 (4.48) | 26,356 (1.84) | 1,25,139 (6.89) |
| (ii) Water Rates | - | - | - | - | - |
| (iii) Lighting Rates | 17,007 (2.95) | 12,832 (1.85) | 7,221 (1.07) | 6,691 (0.47) | 28,694 (1.58) |

Table 2c (Continued)

| | | | | | |
|--------------------------------------|---------------------|---------------------|---------------------|----------------------|----------------------|
| (iv) Conservancy Rates | - | - | - | - | - |
| (v) Tax on Animals and Vehicles | 1,759 (0.31) | 1,851 (0.27) | 806 (0.12) | 463 (0.03) | 5,000 (0.27) |
| (vi) Taxes on Profession and Trades | 3,112 (0.54) | 3,828 (0.55) | 3,905 (0.58) | 3,362 (0.23) | 8,000 (0.44) |
| (vii) Warrant, Fees and Penalties | - | 76 (0.01) | 124 (0.02) | 66 (0.00) | 400 (0.02) |
| (viii) Other Rates and Taxes | 13,444 (2.33) | 10,240 (1.48) | 6,219 (0.93) | 5,345 (0.37) | 22,734 (1.25) |
| B. Realization under Special Act | - | - | - | - | - |
| C. Revenue from Municipal Properties | 32,240 (5.59) | 6,779 (0.98) | 33,117 (4.93) | 8,461 (0.59) | 55,200 (3.04) |
| Total (A+B+C) | 1,26,736 (21.98) | 82,364 (11.91) | 81,488 (12.14) | 50,744 (3.54) | 2,45,167 (13.49) |
| D. Grants and Contributions | 4,47,395 (77.54) | 6,06,908 (87.76) | 5,81,369 (86.50) | 13,66,209 (95.50) | 15,45,449 (85.03) |
| of which : | | | | | |
| (i) Revenue Grants | 3,09,710 (53.68) | 4,37,300 (63.23) | 4,13,470 (61.58) | 4,51,500 (31.56) | 5,86,217 (32.25) |
| (ii) Capital Grants | 1,37,685 (23.86) | 1,69,608 (24.53) | 1,67,899 (25.01) | 9,14,709 (63.94) | 9,58,232 (52.72) |

Table 2c (Continued)

| | | | | | |
|---------------------------|----------------------|----------------------|----------------------|-----------------------|-----------------------|
| E. Miscellaneous | 272 (0.05) | 791 (0.11) | 865 (0.13) | 850 (0.59) | 1,000 (0.06) |
| F. Extra Ordinary Incomes | 2,557 (0.44) | 1,501 (0.22) | 7,674 (1.14) | 12,718 (0.69) | 26,000 (1.43) |
| Grand Total | 5,76,960 (100.00) | 6,91,564 (100.00) | 6,71,396 (100.00) | 14,30,525 (100.00) | 18,17,616 (100.00) |

Note : Figures in parenthesis are percentages to Grand Total.
Source : Sonamukhi Municipality.

Table 2 c (i)

Annual Rate of Growth of Incomes, Sonamukhi/Municipality (percentages)

| Financial Year | 1975-76 | 1976-77 | 1977-78 | 1978-79 | 1979-80 |
|----------------------------|---------|---------|---------|---------|---------|
| Sources | | | | | |
| Revenue Income (A + B + C) | - | 35.00 | 1.06 | -37.73 | 383.13 |
| Grants (D) | - | 35.65 | -4.21 | 135.00 | 13.12 |
| Total Income | - | 19.86 | -2.92 | 113.07 | 27.06 |

Source : Sonamukhi Municipality.

Table 3 a
Collection of Taxes on Land and Buildings by Bishnupur Municipality

| Financial Year Description | 1970-71 | 1975-76 | 1976-77 | 1977-78 | 1978-79 | 1979-80 |
|----------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| A. Gross Demand | | | | | | |
| (i) Arrear Demand | 5,13,850 (100.00) | 7,22,624 (100.00) | 7,86,646 (100.00) | 8,07,218 (100.00) | 8,33,135 (100.00) | 9,61,260 (100.00) |
| (ii) Current Demand | 3,11,803 (60.68) | 5,06,307 (70.08) | 4,75,632 (60.46) | 5,00,852 (62.05) | 5,30,417 (63.66) | 2,99,920 (31.20) |
| | 2,02,047 (39.32) | 2,16,227 (29.92) | 3,11,014 (39.53) | 3,06,366 (37.95) | 3,02,718 (36.34) | 6,61,340 (68.80) |
| B. Remission Granted | | | | | | |
| (i) On Arrear Demand | 1,10,125 (100.00) | 83,135 (100.00) | 97,660 (100.00) | 1,03,741 (100.00) | 28,387 (100.00) | 27,352 (100.00) |
| (ii) On Current Demand | 1,03,595 (94.07) | 66,335 (79.79) | 73,609 (75.37) | 73,143 (70.50) | 17,056 (60.08) | 16,761 (61.28) |
| | 6,530 (5.93) | 16,800 (20.21) | 24,051 (24.63) | 30,598 (29.50) | 11,331 (39.92) | 10,591 (38.72) |
| C. Net Total Demand | | | | | | |
| (i) Net Arrear Demand | 4,03,725 (100.00) | 6,39,489 (100.00) | 6,88,986 (100.00) | 6,20,728 (100.00) | 8,04,748 (100.00) | 9,33,908 (100.00) |
| | 2,08,208 (51.57) | 4,40,062 (68.81) | 4,02,023 (58.35) | 3,44,960 (55.57) | 5,13,361 (63.79) | 2,83,159 (30.32) |

Table 3a (Continued)

| | | | | | | |
|--------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| (ii) Net Current Demand | 1,95,517 (48.43) | 1,99,427 (31.19) | 2,86,963 (41.65) | 2,75,768 (44.43) | 2,91,387 (36.21) | 6,50,749 (69.68) |
| D. Collections | 1,15,363 (100.00) | 2,46,792 (100.00) | 2,85,794 (100.00) | 2,76,801 (100.00) | 1,71,794 (100.00) | 1,89,096 (100.00) |
| (i) Arrear Collections | 60,939 (52.82) | 1,60,340 (64.97) | 1,77,051 (61.95) | 1,55,892 (56.32) | 76,708 (44.65) | 90,031 (47.61) |
| (ii) Current Collections | 54,424 (47.18) | 86,452 (35.03) | 1,08,743 (38.05) | 1,20,909 (43.68) | 95,086 (55.35) | 99,065 (52.39) |
| E. Percentages | | | | | | |
| B (i) to A (i) | 33.22 | 13.10 | 15.48 | 14.60 | 3.22 | 5.59 |
| B (ii) to A (ii) | 3.23 | 7.77 | 7.73 | 9.98 | 3.74 | 1.60 |
| B to A | 21.43 | 11.50 | 12.41 | 12.85 | 3.41 | 2.85 |
| D (i) to C (i) | 29.27 | 36.44 | 44.04 | 45.19 | 14.96 | 31.76 |
| D (ii) to C (ii) | 27.84 | 43.35 | 37.89 | 43.84 | 32.63 | 15.22 |
| D to C | 28.57 | 38.59 | 41.48 | 44.59 | 21.35 | 20.25 |
| D to A | 22.45 | 34.15 | 36.33 | 34.29 | 20.62 | 19.67 |

Note : Figures in parenthesis indicate percentage to the total.
Source : Bishnupur Municipality.

Table 3 b
Collection of Taxes on Land and Buildings of Bankura Municipality

| Financial Year | 1970-71 | 1975-76 | 1976-77 | 1977-78 | 1978-79 | 1979-80 |
|------------------------|---------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Description | | | | | | |
| A. Gross Demand | N.A. | 22,50,917 (100.00) | 22,70,918 (100.00) | 22,97,735 (100.00) | 23,35,911 (100.00) | 23,49,126 (100.00) |
| (i) Arrear Demand | N.A. | 11,54,031 (51.27) | 11,67,771 (51.42) | 11,08,570 (48.25) | 11,74,944 (50.30) | 12,50,800 (53.24) |
| (ii) Current Demand | N.A. | 10,96,886 (48.73) | 11,03,147 (48.58) | 11,89,165 (51.75) | 11,60,967 (49.70) | 10,98,326 (46.76) |
| B. Remission Granted | N.A. | 2,08,610 (100.00) | 2,08,249 (100.00) | 1,55,242 (100.00) | 67,633 (100.00) | 76,371 (100.00) |
| (i) On Arrear Demand | N.A. | 1,63,032 (87.15) | 1,63,794 (78.65) | 70,242 (45.25) | 44,381 (65.62) | 53,907 (70.58) |
| (ii) On Current Demand | N.A. | 45,578 (21.85) | 44,455 (21.35) | 85,000 (54.75) | 23,252 (34.36) | 22,464 (29.41) |
| C. Net Demand | N.A. | 20,42,307 (100.00) | 20,62,669 (100.00) | 21,42,493 (100.00) | 22,68,278 (100.00) | 22,72,755 (100.00) |
| (i) Net Arrear Demand | N.A. | 9,90,999 (48.52) | 10,03,977 (48.67) | 10,38,328 (48.46) | 11,30,563 (49.84) | 11,96,893 (52.66) |

Table 3b (Continued)

| | | | | | | |
|--------------------------|------|----------------------|----------------------|----------------------|-----------------------|-----------------------|
| (ii) Net Current Demand | N.A. | 10,51,308 (51.48) | 10,58,692 (51.33) | 11,04,165 (51.53) | 11,37,715 (50.16) | 10,75,862 (47.34) |
| D. Collections | N.A. | 8,74,536 (100.00) | 9,54,099 (100.00) | 9,67,643 (100.00) | 10,17,478 (100.00) | 10,29,822 (100.00) |
| (i) Arrear Collections | N.A. | 2,56,172 (29.29) | 2,75,664 (28.89) | 2,58,453 (26.71) | 2,55,123 (25.07) | 2,97,228 (28.86) |
| (ii) Current Collections | N.A. | 6,18,364 (70.71) | 6,78,435 (71.11) | 7,09,190 (73.29) | 7,62,355 (74.93) | 7,32,594 (71.14) |
| E. Percentages | | | | | | |
| B (i) to A(i) | - | 14.13 | 14.03 | 6.34 | 3.78 | 4.31 |
| B (ii) to A (ii) | - | 4.15 | 4.03 | 7.15 | 2.00 | 2.04 |
| B to A | - | 9.27 | 9.17 | 6.76 | 2.89 | 3.25 |
| D (i) to C (i) | - | 25.85 | 27.46 | 24.89 | 22.57 | 24.83 |
| D (ii) to C (ii) | - | 58.81 | 64.08 | 64.23 | 67.01 | 68.09 |
| D to C | - | 42.82 | 46.26 | 45.16 | 44.86 | 45.31 |
| D to A | - | 38.85 | 42.01 | 42.11 | 43.56 | 43.84 |

Note : 'N.A.' indicates 'Not Available'.

Source : Bankura Municipality.

Table 3 c
Collection of Taxes on Land and Buildings by Sonamukhi Municipality

| Financial Year | 1970-71 | 1975-76 | 1976-77 | 1977-78 | 1978-79 | 1979-80 |
|-----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Description | | | | | | |
| A. Gross Demand | 1,27,114 (100.00) | 2,52,129 (100.00) | 2,30,310 (100.00) | 2,98,041 (100.00) | 3,83,470 (100.00) | 4,59,383 (100.00) |
| (i) Arrear Demand | 34,545 (27.18) | 1,68,255 (66.73) | 1,43,651 (62.37) | 1,68,730 (56.61) | 2,54,140 (66.27) | 3,30,467 (71.87) |
| (ii) Current Demand | 92,569 (72.82) | 83,937 (33.29) | 86,659 (37.63) | 1,29,316 (43.39) | 1,29,330 (33.73) | 1,29,371 (28.13) |
| B. Remission Granted | 15,278 (100.00) | 8,105 (100.00) | 4,586 (100.00) | 1,352 (100.00) | 882 (100.00) | 651 (100.00) |
| (i) On Arrear Demand | 2,039 (13.35) | 6,090 (75.14) | 2,745 (59.86) | 929 (68.71) | Nil | Nil |
| (ii) On Current Demand | 13,239 (86.65) | 2,015 (24.86) | 1,841 (40.14) | 423 (31.29) | 882 (100.00) | 651 (100.00) |
| C. Net Demand | 1,11,836 (100.00) | 2,44,087 (100.00) | 2,25,724 (100.00) | 2,96,694 (100.00) | 3,82,588 (100.00) | 4,59,187 (100.00) |
| (i) Net Arrear Demand | 32,506 (13.35) | 1,62,165 (75.14) | 1,40,906 (59.86) | 1,67,801 (68.71) | 2,54,140 (66.43) | 3,30,467 (71.97) |

Table 3c (Continued)

| | | | | | | |
|-------------------------|--------------------|----------------------|--------------------|---------------------|---------------------|---------------------|
| (ii) Net Current Demand | 79,330 (86.65) | 81,922 (24.86) | 84,818 (40.14) | 1,28,893 (31.29) | 1,28,448 (33.57) | 1,28,720 (28.03) |
| D. Collection | 26,367 (100.00) | 1,00,436 (100.00) | 56,994 (100.00) | 42,549 (100.00) | 52,121 (100.00) | 58,777 (100.00) |
| (i) Arrear Collection | 10,275 (36.97) | 63,726 (63.45) | 23,736 (41.65) | 23,392 (54.98) | 27,306 (52.39) | 31,977 (55.34) |
| (ii) Current Collection | 16,092 (61.03) | 36,710 (36.55) | 33,258 (58.35) | 19,157 (45.02) | 24,815 (47.61) | 26,800 (45.66) |
| Percentages | | | | | | |
| B (i) to A (i) | 5.90 | 3.62 | 1.91 | 0.55 | — | — |
| B (ii) to A (ii) | 14.30 | 2.40 | 2.12 | 0.32 | 0.68 | 0.50 |
| B to A | 12.02 | 3.20 | 1.99 | 0.45 | 0.23 | 0.14 |
| D (i) to C (i) | 31.61 | 39.30 | 16.85 | 13.94 | 10.74 | 9.68 |
| D (ii) to C (ii) | 20.28 | 44.81 | 39.21 | 14.86 | 19.32 | 20.82 |
| D to C | 23.58 | 41.15 | 25.25 | 25.25 | 13.62 | 12.80 |
| D to A | 20.74 | 39.84 | 24.75 | 14.28 | 13.49 | 12.78 |

Note : Figures in parenthesis indicate percentage to the total.

Source : Sonamukhi Municipality.

Table 4
Collection of Trade Licence Fees of Bishnupur Municipality

| Description | General Trade | | Food Trade | | Dangerous Goods Trade |
|-------------------------|---------------|----------------------|-----------------|-------------------|-----------------------|
| | Year | 1970-1971 | 1974-1975 | 1978-1979 | |
| A. Demand | | • 28,551 (100.00) | 862 (100.00) | 1,459 (100.00) | 2,229 (100.00) |
| (1) Arrear Demand | | 16,431 (57.55) | 286 (33.18) | 489 (33.52) | 822 (36.88) |
| (2) Current Demand | | 12,120 (42.45) | 576 (66.52) | 970 (66.48) | 1,407 (63.12) |
| B. Collections | | 6,697 (100.00) | 722 (100.00) | 937 (100.00) | 827 (100.00) |
| (1) Arrear Collection | | 1,938 (28.76) | 286 (37.05) | 315 (33.60) | 105 (12.60) |
| (2) Current Collection | | 4,759 (70.62) | 486 (62.95) | 622 (66.40) | 722 (87.31) |
| C. Rebate (if any) | | 41 | Nil | Nil | 1 |
| D. Net Total Collection | | 6,656 | 722 | 937 | 826 |

Table 4 (Continued)

| Percentages | | | |
|------------------------------|-------|--------|-------|
| B(i) as percentage of A(i) | 11.80 | 100.00 | 64.42 |
| B(ii) as percentage of A(ii) | 16.67 | 84.38 | 64.18 |
| D as percentage of A | 28.31 | 89.56 | 64.23 |
| | | | 12.77 |
| | | | 51.36 |
| | | | 37.07 |

Note : Bishnupur Municipality.

Source: Figure in the parenthesis represents percentage.

Table 5 a
Types of General Trade Licences issued by the Bishnupur Municipality.

| Description of items | Years | | Percentage change in the number of licences |
|---|----------------|----------------|--|
| | 1970-1971 | 1980-1981 | |
| Wheat and Rice Shops | 43 (13.73) | 117 (6.36) | 172.09 |
| Milk and Milk Products | 24 (2.82) | 41 (2.40) | 70.83 |
| Fruits and Vegetables | 2 (0.23) | 10 (0.54) | 400.00 |
| Grocery | 72 (8.45) | 202 (11.84) | 180.55 |
| Sweetmeat shops, Betel shops and Tea Stalls | 198 (23.24) | 230 (13.48) | 16.16 |
| Traditional Manufacturing (e.g., Lantern and Bidi) | 16 (1.88) | 30 (1.76) | 87.50 |
| Tannery | 1 (0.12) | 4 (0.23) | 300.00 |
| Oil Mill | 4 (0.46) | 8 (0.47) | 100.00 |
| Textile | 78 (9.15) | 125 (7.33) | 60.26 |

Table 5a (Continued)

| | | | |
|---|--------|--------|--------|
| Utensils (Bell Metal, Aluminium) | 48 | 120 | 150.00 |
| | (5.63) | (7.03) | |
| Ornaments and Jewellers | 22 | 29 | 31.82 |
| | (2.58) | (1.70) | |
| Money Lending Agents | 7 | 17 | 142.86 |
| | (0.82) | (1.00) | |
| Miscellaneous Petty Trade | 7 | 21 | 200.00 |
| | (0.82) | (1.23) | |
| Bricks and Ringwells | 11 | 8 | -27.27 |
| | (1.29) | (0.47) | |
| Husking and Grinding Mills | 13 | 44 | 238.46 |
| | (1.53) | (2.58) | |
| Fertilizer and Seeds | - | 22 | - |
| Modern Manufacturing (Grill Gate, Musical Instrument) | 24 | 16 | -33.33 |
| | (2.82) | (0.94) | |
| Cars and Cycle Repairing Shops | 27 | 52 | 92.59 |
| | (3.17) | (3.05) | |
| Watch, Radio, Mike, Photo and Electrical Goods | 16 | 71 | 343.75 |
| | (1.88) | (4.16) | |
| Hardware | 12 | 17 | 41.66 |
| | (1.41) | (1.00) | |

Table 5a (Continued)

| | | | |
|----------------------------|--------|--------|--------|
| Stationery Shop | 43 | 77 | 79.07 |
| | (5.05) | (4.51) | |
| Shoe Sellers | 6 | 7 | 16.66 |
| | (0.70) | (0.41) | |
| Books, Pins etc. | 9 | 13 | 44.44 |
| | (1.06) | (0.76) | |
| Furniture and Art Products | 5 | 25 | 400.00 |
| | (0.59) | (1.47) | |
| Transport | 3 | 6 | 100.00 |
| | (0.35) | (0.35) | |
| Hotel | 10 | 15 | 50.00 |
| | (1.17) | (0.88) | |
| Press | - | 6 | - |
| | (0.00) | (0.35) | |
| Coal Dealers | 17 | 65 | 282.35 |
| | (2.00) | (3.81) | |
| Kerosene Oil Dealers | 8 | 10 | 25.00 |
| | (0.94) | (0.50) | |
| Cement Dealers | 2 | 4 | 100.00 |
| | (0.23) | (0.23) | |

Table 5a (Continued)

| | | | |
|-----------------------|--------------|---------------|--------|
| Tea Merchants | 5 (0.59) | 16 (0.92) | 220.00 |
| Petrol Dealers | (0.00) | 6 (0.34) | - |
| Medical Stores | 11 (1.29) | 45 (2.64) | 309.00 |
| Medical Practitioners | 26 (3.05) | 15 (0.88) | 42.31 |
| Legal Practitioners | 37 (4.34) | 35 (2.05) | -5.41 |
| Contractors | 34 (3.99) | 143 (8.38) | 320.59 |
| M. R. Shops | 8 (0.94) | 16 (0.92) | 100.00 |
| Banks | 8 (0.94) | 15 (0.86) | 87.50 |

Table 5a (Continued)

| | | | |
|-------------------------------|----------|----------|--------|
| Public Entertainment | - | 2 | - |
| | (0.00) | (0.11) | |
| Foreign Liquor | - | 1 | - |
| | (0.00) | (0.05) | |
| Total | 852 | 1,706 | 100.23 |
| | (100.00) | (100.00) | |
| Source : Bankura Municipality | | | |

Table 5b

Types of Food Trade Licences issued by Bishnupur Municipality

| Types | Financial Year | 1974-1975 | 1980-1981 | Percentage change in number of licenses |
|---------------------------|----------------|---------------|----------------|---|
| Grocery | | 61 (38.13) | 108 (30.34) | 77.05 |
| Traditional Confectionery | | 45 (28.13) | 51 (14.33) | 13.33 |

Table 5b (Continued)

| | | | |
|---------------------------------------|-----------------|-----------------|--------|
| Modern Confectionery | 8 (5.00) | 28 (7.87) | 250.00 |
| Milk Traders | 8 (5.00) | 14 (14.33) | 75.00 |
| Hotel | 6 (3.75) | 13 (3.65) | 116.67 |
| Bakery | 5 (3.13) | 11 (3.09) | 120.00 |
| Edible Oil | 3 (1.86) | 5 (1.4) | 66.67 |
| Retail Sale of Tea | - (0.00) | 11 (3.09) | - |
| Vendor of Fish, Milk, Sweetmeat etc., | 24 (15.0) | 115 (32.3) | 379.17 |
| Total | 160 (100.00) | 356 (100.00) | 122.50 |

Note : Figures in parenthesis represent percentage.

Source : Bishnupur Municipality.

Table 5 c
Types of Dangerous Goods Trade Licences Issued by Bishnupur Municipality

| Items | Years | 1970-1971 | 1980-1981 | Percentage change in number of licenses |
|------------------------|-------|----------------|----------------|--|
| Kerosene Oil | | 128 (44.91) | 173 (47.66) | 35.16 |
| Wood Stock | | 15 (5.26) | 18 (4.96) | 20.00 |
| Engineering Industries | | 18 (6.32) | 16 (4.41) | -11.11 |
| Lime Stone | | 4 (1.40) | 2 (0.55) | -50.00 |
| Cinema Hall | | 3 (1.05) | 3 (0.83) | 0.00 |
| Microphone | | 25 (8.77) | 35 (9.64) | 40.00 |
| Meat Shop | | 28 (9.82) | 26 (7.16) | -7.14 |
| Slaughter House | | 28 (9.82) | 21 (5.79) | -25.00 |

Table 5c (Continued)

| | | | |
|-------------|-----------------|-----------------|----------|
| Tannery | 2 (0.70) | 4 (1.10) | 100.00 |
| Coal | 31 (10.88) | 47 (12.95) | 51.61 |
| Bricks | 2 (0.70) | - | - |
| Dying | - | 2 (0.55) | - |
| Machine Oil | - | 1 (0.27) | - |
| Others | 1 (0.35) | 15 (41.32) | 1,400.00 |
| Total | 285 (100.00) | 363 (100.00) | 27.37 |

Source : Bishnupur Municipality.

Table 6

**List of Rickshaw-Owners Distributed According to
Occupational Classes, Bishnupur Municipality**

| Occupational Classes | Number of Owners |
|---------------------------|---------------------|
| Rickshaw Owner-cum-Puller | 225 (40.39) |
| Unemployed/Retired | 87 (16.51) |
| Cycle Shop Owner | 68 (12.21) |
| Cooperative Society | 32 (6.07) |
| Business | 58 (10.41) |
| Petty Business | 24 (4.31) |
| School Teachers | 12 (2.15) |
| Pleaders | 2 (0.36) |
| Others | 19 (3.41) |
| Total | 527 (100.00) |

Note : Figures in parenthesis represent percentage.

Source : Bishnupur Municipality.

Table 7a
Expenditure Pattern of the Bishnupur Municipality

| Description | Financial Year | | 1980-1981 (Budget Estimates) |
|---------------------------------|------------------------|------------------------|------------------------------------|
| | 1975-1976 (Actuals) | 1978-1979 (Actuals) | |
| Total Wages | 5,75,812 (76.98) | 8,36,136 (58.60) | 9,99,630 (50.84) |
| Total Recurring Expenditure | 52,507 (7.05) | 46,971 (3.29) | 1,17,085 (5.95) |
| Total Non-Recurring Expenditure | 55,646 (7.44) | 1,96,957 (13.80) | 6,37,974 (32.44) |
| Total Other Expenditure | 63,826 (8.53) | 3,46,835 (24.31) | 2,11,639 (10.76) |
| Total Expenditure | 7,47,986 (100.00) | 14,26,897 (100.00) | 19,66,328 (100.00) |
| Alternative Break-up : | | | |
| (1) General Administration | 26,436 (3.53) | 50,607 (3.55) | 54,000 (2.75) |
| (2) Tax Collection | 71,702 (9.59) | 91,815 (6.43) | 1,48,000 (7.53) |
| (3) Lighting | 22,572 (3.02) | 4,764 (0.33) | 58,000 (2.95) |

Table 7a (Continued)

| | | | |
|-----------------------------------|---------------------|---------------------|---------------------|
| (4) Water Supply | 2,636 (1.69) | 47,269 (3.31) | 53,000 (2.70) |
| (5) Drainage | 13,797 (1.84) | 49,143 (3.44) | 66,000 (3.36) |
| (6) Conservancy | 1,67,900 (22.45) | 2,34,129 (16.41) | 1,11,000 (5.65) |
| (7) Hospital and Clinic | 600 (0.08) | 720 (0.05) | 720 (0.04) |
| (8) Public Health | 29,731 (3.97) | 46,239 (3.24) | 1,60,310 (8.15) |
| (9) Roads | 33,042 (4.42) | 1,21,023 (8.48) | 4,48,000 (22.78) |
| (10) Buildings | | | 10,000 (0.51) |
| (11) Public Instructions | 3,05,744 (40.88) | 4,34,353 (30.44) | 6,45,659 (32.84) |
| (12) Loan Repayments and Interest | 5,468 (0.73) | 44,976 (3.15) | 41,699 (2.12) |
| (13) Miscellaneous | 4,801 (0.64) | 10,652 (0.75) | 44,500 (2.26) |

Table 7a (Continued)

| | | | |
|---------------------------------|------------------|---------------------|--------------------|
| (14) Grants to other Bodies | 1,932 (0.26) | 2,484 (0.17) | 2,672 (0.14) |
| (15) Extra-Ordinary Expenditure | 51,629 (6.90) | 2,68,723 (10.23) | 1,12,768 (6.24) |

Note : Figures in parentheses represent percentages to the total.
Source : Bishnupur Municipality.

**Table 7 b
Expenditure Pattern of Bankura Municipality**

| Item | Financial Year | 1975-1976 (Actuals) | 1978-1979 (Actuals) | 1980-1981 (Budget Estimates) |
|---------------------------------|----------------|------------------------|------------------------|------------------------------------|
| Total Wages | | 15,57,400 (25.98) | 19,34,762 (46.59) | 56,90,577 (95.61) |
| Total Recurring Expenditure | | 9,52,762 (21.31) | 14,33,332 (34.52) | 56,90,577 (95.61) |
| Total Non-Recurring Expenditure | | 5,94,638 (15.62) | 2,56,445 (6.17) | - |

Table 7b (Continued)

| | | | |
|-----------------------------|-----------------------|-----------------------|-----------------------|
| Other Expenditures | 2,52,863 (9.09) | 5,28,156 (12.72) | 2,61,048 (+39) |
| Total Expenditure | 27,82,112 (100.00) | 41,52,695 (100.00) | 39,51,625 (100.00) |
| Alternative Break-up : | | | |
| (i) General Administration | 71,690 (2.58) | 1,13,296 (2.73) | 1,08,624 (1.82) |
| (ii) Tax Collections | 1,28,549 (4.62) | 2,03,896 (+91) | 2,12,401 (+53) |
| (iii) Lighting | 76,946 (2.77) | 77,214 (1.86) | 84,553 (1.42) |
| (iv) Water Supply | 2,28,121 (8.19) | 3,57,604 (8.60) | 15,32,364 (25.15) |
| (v) Drainage | 82,881 (2.98) | 1,64,500 (3.96) | 1,59,516 (2.68) |
| (vi) Conservancy | 4,63,786 (16.67) | 8,32,478 (20.06) | 13,15,131 (22.10) |
| (vii) Hospitals and Clinics | 5,940 (0.21) | 6,430 (0.15) | 6,780 (0.13) |

Table 7b (Continued)

| | | | |
|------------------------------------|-----------------------|-----------------------|-----------------------|
| viii) Public Health | 2,28,769 (8.22) | 3,62,082 (8.72) | 1,93,020 (5.24) |
| (ix) Roads | 3,40,695 (12.25) | 1,48,591 (5.58) | 2,70,000 (4.54) |
| (x) Buildings | 31,592 (1.14) | 63,724 (1.53) | 90,000 (1.51) |
| (xi) Public Instructions | 8,70,280 (31.28) | 12,94,724 (31.18) | 17,18,188 (28.87) |
| (xii) Loans Repayment and Interest | 41,651 (1.50) | 41,016 (1.00) | 37,000 (0.62) |
| (xiii) Miscellaneous | 46,010 (1.65) | 2,98,922 (7.20) | 94,048 (1.58) |
| (xiv) Grants to other Bodies | 1,05,207 (3.94) | 1,87,618 (4.52) | 1,30,000 (2.18) |
| (xv) Extra Ordinary Expenditures | 27,82,112 (106.00) | 41,52,095 (100.00) | 59,51,625 (100.00) |
| Total | | | |

Note : Figures in parenthesis represents percentage of total expenditure.

Source : Bankura Municipality.

Table 7 c
Expenditure Pattern of Sonamukhi Municipality

| Description | Financial Year | 1975-1976 (Actuals) | 1978-1979 (Actuals) | 1980-1981 (Budget Estimates) |
|---------------------------------|----------------|------------------------|------------------------|------------------------------------|
| | | | | |
| Total Wages | | 3,80,868 (74.74) | 6,85,155 (67.02) | 7,45,068 (56.06) |
| Total-Recurring Expenditure | | 72,710 (14.27) | 76,185 (7.45) | 71,581 (5.58) |
| Total Non-Recurring Expenditure | | 16,971 (3.33) | 148 (0.01) | 3,79,053 (29.54) |
| Total Other Expenditure | | 39,016 (7.66) | 2,60,792 (25.51) | 87,525 (6.82) |
| Total Expenditure | | 5,09,565 (100.00) | 10,22,280 (100.00) | 12,83,227 (100.00) |
| Alternative Break-up : | | | | |
| (1) General Administration | | 27,640 (5.40) | 31,435 (3.07) | 37,705 (2.94) |
| (2) Tax Collection | | 34,537 (6.78) | 46,278 (4.53) | 52,588 (4.10) |
| (3) Lighting | | 39,937 (7.84) | 35,783 (3.50) | 48,157 (3.75) |

Table 7c (Continued)

| | | | |
|---------------------------------|---------------------|---------------------|---------------------|
| (4) Water Supply | 359 (0.07) | - | 55,000 (4.29) |
| (5) Drainage | - | - | - |
| (6) Conservancy | 51,638 (10.13) | 92,674 (9.06) | 1,41,637 (11.04) |
| (7) Hospital and Clinic | - | - | - |
| (8) Public Health | 8,783 (1.72) | 8,658 (0.85) | 14,033 (1.09) |
| (9) Roads | 7,080 (1.39) | 48 (0.00) | 2,80,000 (21.82) |
| (10) Buildings | 9,002 (1.77) | - | - |
| (11) Public Instructions | 2,91,583 (57.22) | 4,46,612 (43.69) | 5,00,308 (43.66) |
| (12) Loan Repayments Interest | 3,500 (0.69) | - | 41,253 (3.21) |
| (13) Miscellaneous | 23,471 (4.61) | 1,35,037 (13.21) | 15,800 (1.23) |
| (14) Grants to Other bodies | - | - | - |
| (15) Extra Ordinary Expenditure | - | - | 19,850 (1.55) |

Source : Sonamukhi Municipality.

Table 8
Census Population Figures of the Towns in Bankura District

| | | | M U N I C I P A L | | | | | | T O W N S | | | | | |
|------------------|------------|------------|---|------------|------------|---|------------|------------|---|------------|------------|--|--|--|
| Bankura District | | | Bankura Town (Area : 18.13 km ²) | | | Bishnupur Town (Area : 20.72 km ²) | | | Sonamukhi Town (Area : 11.65 km ²) | | | | | |
| Year | Population | Growth (%) | Population | Size Class | Growth (%) | Population | Size Class | Growth (%) | Population | Size Class | Growth (%) | | | |
| 1872 | - | - | 16,794 | IV | - | 18,047 | IV | - | 12,565 | IV | - | | | |
| 1881 | - | - | 18,747 | IV | 11.6 | 18,863 | IV | 4.5 | 5,590 | V | -55.5 | | | |
| 1891 | - | - | 18,743 | IV | -0.0 | 18,190 | IV | -3.6 | 13,462 | IV | 140.8 | | | |
| 1901 | 11,16,411 | - | 20,737 | III | 12.7 | 19,090 | IV | 4.9 | 13,448 | IV | -0.1 | | | |
| 1911 | 11,38,670 | 2.0 | 23,453 | III | 13.1 | 20,478 | III | 7.3 | 13,275 | IV | -1.3 | | | |
| 1921 | 10,19,941 | -10.4 | 25,412 | III | 8.4 | 19,398 | IV | -5.3 | 10,644 | IV | -19.8 | | | |
| 1931 | 11,11,721 | 9.0 | 31,703 | III | 24.8 | 19,696 | IV | 1.5 | 10,989 | IV | 3.2 | | | |
| 1941 | 12,89,640 | 16.0 | 46,617 | III | 47.0 | 24,961 | III | 26.7 | 14,667 | IV | 33.5 | | | |
| 1951 | 13,19,259 | 2.3 | 49,369 | III | 5.9 | 23,981 | III | -3.9 | 12,352 | IV | -15.8 | | | |
| 1961 | 16,64,513 | 26.2 | 62,833 | II | 27.3 | 30,958 | III | 29.1 | 15,027 | IV | 21.7 | | | |
| 1971 | 20,31,039 | 22.0 | 79,129 | II | 25.9 | 38,135 | III | 23.2 | 18,974 | IV | 20.8 | | | |
| 1981 | 23,74,205 | 16.9 | 94,910 | II | 19.9 | 47,482 | III | 24.5 | 19,899 | IV | 4.9 | | | |

Table 8 : (Continued)

| NON-MUNICIPAL TOWNS | | | | | | |
|--|------------|---------------|-----------------|---|---------------|-----------------|
| Khatra Town (Area : 7.51 km ²) | | | | Patrasaer Town (Area : 8.73 km ²) | | |
| Year | Population | Size Class | Growth (%) | Population | Size Class | Growth (%) |
| 1872 | — | — | — | 6,783 | V | — |
| 1881 | — | — | — | 7,026 | V | 3.6 |
| 1891 | — | — | — | D | — | — |
| 1901 | — | — | — | D | — | — |
| 1911 | — | — | — | D | — | — |
| 1921 | — | — | — | 5,435 | V | — |
| 1931 | — | — | — | 4,854 | V | 10.7 |
| 1941 | — | — | — | 5,731 | V | 18.1 |
| 1951 | 4,127 | VI | — | 4,789 | V | -16.4 |
| 1961 | 6,757 | V | 63.7 | 6,582 | V | 37.4 |
| 1971 | 8,519 | V | 26.1 | 6,978 | V | 6.0 |
| 1981 | 10,841 | IV | 27.3 | 8,039 | V | 15.2 |

Notes (i) 'D' means declassification of town.

(ii) Size classification is according to Census of India.

Table 9

**Census of three Municipal Towns of Bankura, and the
Bankura District for Last three Decades**

| Description | Place | Bankura District | | | Bankura Town | | | |
|----------------------|-------|------------------|-----------|-----------|--------------|---------|---------|---------|
| | | Year | 1961 | 1971 | 1981 | 1961 | 1971 | 1981 |
| Total Population | | | 16,64,513 | 20,31,039 | 23,74,205 | 62,833 | 79,129 | 94,910 |
| Males | | | 8,40,423 | 10,37,267 | 12,08,424 | 33,473 | 41,594 | 49,392 |
| | | | (50.49) | (51.07) | (50.89) | (53.27) | (52.56) | (52.04) |
| Females | | | 8,24,090 | 9,93,772 | 11,65,781 | 29,360 | 37,535 | 45,518 |
| | | | (49.51) | (48.93) | (49.11) | (46.73) | (47.44) | (47.96) |
| Scheduled Caste | | | 4,92,700 | 5,73,162 | - | 13,742 | 15,669 | 21,433 |
| | | | (29.60) | (28.22) | - | (21.87) | (19.80) | (22.58) |
| Scheduled Tribe | | | 1,73,389 | 2,08,735 | - | 928 | 163 | 501 |
| | | | (10.42) | (10.28) | - | (1.48) | (0.21) | (0.53) |
| Educated | | | 3,84,191 | 5,34,116 | 5,97,197 | 28,286 | 37,554 | 56,191 |
| | | | (23.08) | (26.30) | (25.15) | (45.02) | (47.46) | (59.20) |
| Educated among Males | | | 3,04,019 | 3,90,363 | 2,69,387 | 19,022 | 24,042 | 34,015 |
| | | | (18.26) | (19.22) | (11.35) | (30.27) | (30.35) | (35.84) |

Table 9 (Continued)

| | | | | | | |
|--|---------------------|---------------------|--------------------|------------------|-------------------|-------------------|
| Educated among Females | 80,172 (4.82) | 1,43,753 (7.08) | - | 9,264 (14.74) | 13,512 (17.08) | 22,176 (23.37) |
| Cultivators | 3,17,928 (19.10) | 2,39,282 (11.78) | 2,83,463 (9.80) | 175 (0.28) | 379 (0.48) | 348 (0.37) |
| Agricultural Labour | 1,49,197 (8.96) | 2,28,519 (11.25) | 2,36,917 (9.98) | 104 (0.16) | 951 (1.20) | 649 (0.68) |
| Household Industry | 35,260 (2.12) | 21,466 (1.06) | 34,569 (1.46) | 2,263 (3.60) | 2,448 (3.09) | 2,924 (3.08) |
| Trade and Commerce | 18,316 (1.10) | 16,520 (0.81) | N.A. | 1,674 (2.66) | 4,074 (5.15) | N.A. |
| Manufacturing other than Household Industry | 17,247 (1.04) | 14,452 (0.71) | N.A. | 3,143 (5.00) | 2,736 (3.46) | N.A. |
| Other workers | 68,345 (4.11) | 54,696 (2.69) | - | 8,596 (13.68) | 9,164 (11.58) | 20,930 (22.05) |
| People Actively Looking For Jobs | N.A. | N.A. | - | N.A. | N.A. | 10,978 (11.57) |

Table 9 (Continued)

| Description | Place | | Bishnupur Town | | Sonamukhi Town | |
|------------------------|-------|--|----------------|---------|----------------|---------|
| | Year | | 1961 | 1971 | 1981 | 1981 |
| Total Population | | | 30,958 | 38,135 | 47,482 | 15,027 |
| Males | | | 16,826 | 19,659 | 24,158 | 7,521 |
| | | | (54.35) | (51.55) | (50.85) | (50.05) |
| Females | | | 14,672 | 18,476 | 23,324 | 7,506 |
| | | | (47.39) | (48.45) | (49.12) | (49.95) |
| Schedule Caste | | | 6,285 | 7,064 | 10,029 | 2,864 |
| | | | (20.30) | (18.52) | (21.12) | (19.05) |
| Schedule Tribe | | | 73 | 279 | 151 | 150 |
| | | | (0.24) | (0.73) | (0.32) | (1.00) |
| Educated | | | 13,045 | 15,957 | 27,048 | 5,448 |
| | | | (42.14) | (41.84) | (56.96) | (36.26) |
| Educated among Males. | | | 9,187 | 10,217 | 16,298 | 3,710 |
| | | | (29.68) | (26.79) | (34.32) | (24.69) |
| Educated Among Females | | | 3,858 | 5,740 | 10,760 | 1,738 |
| | | | (12.46) | (15.05) | (22.64) | (11.57) |
| Cultivators | | | 380 | 357 | 466 | 276 |
| | | | (1.23) | (0.94) | (0.98) | (1.84) |
| | | | | | | 337 |
| | | | | | | (1.78) |
| | | | | | | 293 |
| | | | | | | (1.47) |

Table 9 (Continued)

| | | | | | | |
|--|------------------|-----------------|------------------|-----------------|-----------------|------------------|
| Agriculture Labour | 177 (0.57) | 828 (2.17) | 385 (0.81) | 131 (0.87) | 650 (3.47) | 724 (3.64) |
| Household Industry | 2,135 (6.89) | 1,835 (4.80) | 2,080 (4.38) | 749 (4.98) | 947 (4.99) | 624 (3.13) |
| Trade and Commerce | 1,395 (4.39) | 1,735 (4.55) | N.A. | 757 (5.04) | 823 (4.34) | N.A. |
| Manufacturing other than Household Industry | 1,365 (4.41) | 823 (2.16) | N.A. | 852 (5.67) | 344 (1.81) | N.A. |
| Other Workers | 3,540 (11.43) | 3,582 (9.39) | 8,081 (17.02) | 1,336 (8.89) | 1,427 (7.50) | 3,486 (17.52) |
| People Actively Looking For Jobs | N.A. | N.A. | 6,346 (13.36) | N.A. | N.A. | 1,911 (9.60) |

Source : Census of India.

Table 10
Results of Sample Study of Families Proposing New Construction at Bishnupur

| Characteristics | Last two generations' place of residence | Bishnupur | Some surrounding villages | Some Other Towns |
|--|--|---------------|---------------------------|------------------|
| Total Number of Observations | | 16 (59.26) | 9 (33.33) | 2 (7.41) |
| Occupational Classes | | | | |
| (a) Artisans | | 8 (50.00) | 1 (11.11) | 0 (0.00) |
| (b) Businessmen | | 4 (25.00) | 3 (33.33) | 1 (50.00) |
| (c) Service holders | | 4 (25.00) | 5 (55.50) | 1 (50.00) |
| Average Family Earning Years | | 45.50 | 27.44 | 31.00 |
| Per Capita Family Income | | 161.93 | 228.98 | 2,883.93 |
| Percentage of young members studying | | 61.86 | 100.00 | 100.00 |
| Percentage of cases still owning cultivable land | | 56.25 | 77.77 | 50.00 |
| Percentage of cases with forefathers' owning cultivable land | | 87.50 | 77.77 | 100.00 |
| Percentage of cases with some forefathers' Occupation | | 62.50 | 33.33 | 100.00 |

Table 10 (Continued)

| | | | |
|--|-------|--------|--------|
| Percentage of cases with Pucca Residence | 81.25 | 100.00 | 100.00 |
| Percentage of cases with Latrine | 43.75 | 66.66 | 100.00 |
| Percentage of cases with own water supply | 75.00 | 66.66 | 100.00 |
| Percentage of cases with electric connections | 62.50 | 88.88 | 100.00 |
| Percentage of cases using modern (Car, Scooters, Fan, Sofas, etc.) goods | 81.25 | 100.00 | 100.00 |

Source : Bishnupur Municipality.

Notes

1. If one closely examines the family origins of past Chairmen, Vice-chairmen and commissioners of this municipality, one would get the impression that members of one 'Bhattacharyya' family, one 'Choudhuri' family and one 'Kar' family had specialized in municipal affairs for a long spell of time.

2. However, the commissioners at present enjoy allowances for certain restricted activities. We have been told that the Chairman and the Vice-chairman will begin to get some remuneration in the near future.

3. It is therefore not surprising that socially powerful groups like legal and medical practioners would not register their names with the municipality's licensing authority.

4. The municipality does not even maintain any statistical record about these professionals. According to our estimates, there are about 2,400 such households in this area.

5. These markets have serious space problems and usually they create traffic congestion at peak hours on those localities.

6. The local sympathizers of the official leaseholder have a nice way of rationalizing the whole thing. In their views, when institutional means of risk-bearing are inadequate for the unorganized section of people, when a businessman loses his business, this is a simple and fairly reasonable way of earning some means of livelihood to the ruined businessmen.

7. The story goes as follows : Initially, it was decided that water would be available from a local reservoir (Bund). It was exempted from taxes. After some time, it was found that the reservoir lacked the capacity to supply the water needs of the town. However, the Irrigation Department agreed to feed the reservoir in case it dried up. But this meant the municipality would have to dig their own feeding canals and further excavate the reservoir. This sounded too costly to the municipal authorities. Well, at the same time, a big eye-pleasing water tank was constructed in the heart of the town. Anyway, for some time, the authorities derived comfort from the fact that the scheme could be saved by digging several deep tubewells in the town, but this idea too had to be dropped as these were found unsuitable for the soil class of this region. Eventually, it was decided that water be procured from the Birai river, although it would mean construction and maintenance of fairly long pipe lines.

Since the water tank had been constructed in the meantime, the authorities, in order to avoid developing cracks in it, had to keep the tank always full with water. This too, was found to be a fairly costly job.

8. Municipalities do have an important responsibility, in constructing and maintaining a few main drains within its jurisdiction area. If a person constructs a building in a relatively obscure area, he should be asked to submit (if necessary through change in laws) his drainage plans along with the building plan, and also bear the cost of linking his private drain with the municipal drain.

9. The local employment exchange office informed us that the meagre amount of jobs they could offer to the local people since its inception were all service jobs in the Government sector.

10. The craze for making new construction has sharply increased in recent years, but due to non-availability of necessary building-plans, a large percentage of these plans could not be completed. It is important to point out at this stage that out of 34 households drawn at random, only 8 were found to be really making new constructions, 19 doing extension work and remaining 7 could not be traced at all. However, the municipal records would give the impression that all of them are making new constructions. A check is very much necessary since the question of cement permit is involved.

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CHANDERNAGORE — AN ECONOMIC PROFILE OF A COMMUTER TOWN

Bhaskar Bhattacharyya

Early history

Formerly a French settlement, Chandernagore, a subdivisinal town of Hooghly district, is situated on the West Bank of the river Hooghly, some 34 kilometres from Calcutta.¹ After the decay of the river port of Saptagram, Chandernagore was one of several places under European colonial powers which became important centres of trade along the downstream of Hooghly river. In 1688, Emperor Aurangzeb had issued one farman under which the French were permitted to conduct trade at Chandernagore. Their representative, Borough Delandes, had, in addition to this farman, obtained seven bighas of rent-free land from the Nawab of Bengal to erect his factory, godowns and residence. In 1701 the town came under the administration of Pondichery, another French settlement in India. However, the town had made no remarkable progress in trade and commerce until the arrival of Joseph Dupleix, who transformed the town into the most prosperous trade centre of Bengal during his stay of only ten years. In contrast, Calcutta in those days was very subdued; and the envy of the English was one of the factors that led to the invasion and capture of Chandernagore by Robert Clive in 1757. It was restored to the French by Treaty of Paris in 1763; but the town changed hands between the French and the English several times even after that. From 1816, however, the French had their uninterrupted administration upto 1947 when an interim government was formed by a representative body called the Administrative Council (later named Free City Council), the sovereignty still resting with the French Republic. Thereafter, through a referendum held in 1949, the people of Chandernagore opted to join India, and the Government of India took over the administration in 1951 through a treaty with the French Republic. The town was merged with West Bengal in

1. See, *Hooghly District Gazetteer*, for the historical background.

1954, and it became the headquarter of a newly created subdivision comprising this town and four thanas of Serampore subdivision, viz., Bhadreswar, Singur, Haripal and Tarakeswar.

Demography

Chandernagore town, with an area of 9.66 square kilometres has emerged as a class I town with a population of 1,01,568 in 1981 census.

The decennial percentage variations in Table 1 reveal that, excepting for the period 1961-71, the town has maintained a steady growth rate of around 30 to 34% in each decade. The growth rate of 12.11% during 1961-71 is unusually low and un-explainable. If we compare the figures for Chandernagore with the urban population of Hooghly district as a whole the abnormally low growth rate of Chandernagore during 1961-71 becomes even more glaring (Table 2).

In 1954, when Chandernagore merged with West Bengal, many government offices, court etc. were established in the town as it became a sub-divisional headquarters. In 1957 the Howrah-Burdwan Main Railway line was electrified and this reduced the commuting time-distance of Calcutta. These two facts reveal the unexplainable low growth rate in the 1961-71 period. But the nearby town of Serampore also experienced a low growth rate of 11.76% during 1961-71, which is comparable with that of Chandernagore. Serampore's growth rates were 23.14% during 1951-61 and 34.31% during 1941-51.

In the growth of population of a town, migration plays an important role. In the case of Chandernagore up-to-date migration data are not available. The usual practice of the census authorities is to publish migration tables on district basis. But, upto 1951, Chandernagore was not a part of the Hooghly District (or for that matter of West Bengal) and that is why some data on migration are available upto 1951 Census which are given in (Table 3)

The table does not show any significant role of migration, though 1951 figures of in-and-out-migration are not negligible, the net immigration is, not much. However, the civic authorities and government officials believe that immigration of Bangladesh (erstwhile East Pakistan) refugees took place on a significant scale during the fifties, as confirmed by the growth of several refugee colonies in the town. According to a rough estimate submitted by

the Deputy Mayor of Chandernagore, the three major government colonies of Haridradanga, Nahadanga and Dinemordanga have the respective population figures of 10,000, 7,000 and 3,000. Besides these, there are several other small settlements of refugee population in the town. Though we could not gather any quantitative information on immigrant population from other states of India in Chandernagore, we did have some idea about it from our discussion with a large cross-section of people, both official and non-official. Gondalpara Jute Mill, the only large scale industrial unit of the town, has more than 90% of its manual workers from other states, mainly Bihar and eastern U.P. The saw mill industry (the third most important manufacturing activity of the town being furniture making according to 1971 Census) also employs a large number of immigrant workers, particularly in the timber-cutting trade. The municipal corporation of Chandernagore has 325 workers from other states, mostly in its scavenging department. Nearly 30% to 40% of the cycle rickshaw pullers in the town are from other states. The Urdubazar area of the town is mainly inhabited by the urduspeaking, muslim population who are engaged in tailoring and other small trades in the informal sector. As regards seasonal immigration of agricultural labourers from the rural hinterland to the town, the Deputy Mayor of Chandernagore and the President of Khalisani Gram Panchayat opined that, due mainly to the working of the 'Food for work Programme' in the surrounding rural areas, the flow of off-season agricultural labourers to the town has become negligible during the last four years. Prior to that it was a significant phenomenon and a large rural workforce used to come to the town in search of jobs.

History of growth

The early growth of Chandernagore was primarily due to the French settlement. As in the case of other towns along the west bank of the Hooghly river, the development of Chandernagore was greatly influenced by the river itself on the one hand and Grand Trunk Road and railway line on the other, in the nineteenth century. Rail, road and water transport links with Calcutta were the main determinants of development of Chandernagore. Trade, commerce and small industries, particularly the handloom industry, developed. In the early twentieth century when Swadeshi movement started and spread to other parts of Bengal, the consequent British repression made Chandernagore a haven for the fugitives. The middle and

upper middle class people migrated in search of a quiet and decent urban life with elaborate civic amenities offered by the municipal administration of the town.

After the French withdrawal in 1954, Chandernagore was made the headquarters of a newly-created subdivision. The growth of Chandernagore was further encouraged when a court and other government offices were established. The electrification of the Howrah-Burdwan railway in 1957 and the deterioration in the housing conditions of Calcutta and other industrial towns were other factors which also encouraged a substantial section of the middle class to move to Chandernagore and commute from there. Though not an industrial town itself, its growth has benefitted from the industrial development of the adjoining regions from Howrah to Tribeni on the West bank and from Calcutta to Naihati on the east bank of the river. This is borne out by the occupational pattern of the town, and has led the census authorities to classify it as an industrial town. In addition, transport and communication links with the surrounding region facilitated the growth which further encouraged trade, commerce and internal transport.

Industrial and agricultural growth in the district

Table 4 shows the factory (registered) employment in Hooghly district over the last 21 years. It shows a distinct rising trend, excepting for the period 1965-70, which resulted from the industrial recession in West Bengal. It increased from 64,811 to 1,02,786 in 1979.

Table 5 gives the total number of registered unit in the small scale industry sector of the district. Table 6 shows the number of new units which have gone into production, employment generated by those units and the amount of fixed capital involved for the last ten years in the district. However, Tables 5 and 6 together also underestimate the progress of the small scale industry sector, because only those units which seek financial and other help from the Small-Scale Industries Directorate of the West Bengal Government are required to be registered with the District Industries Centre which processes the applications and grants financial help.

The growth of this town is atleast partly attributable to its development of hinterland, which is one of the agriculturally advanced regions of West Bengal. Some facts about the district's agriculture given below will bear this out :

| | |
|------------------------------|-------------------|
| Mono-cropped area | - 1,978.81 acres |
| Double-cropped area | - 2,755.95 acres |
| Triple-cropped area | - 63,192.00 acres |
| More than three cropped area | - 7,670.00 acres* |

We see that 63.6% of the total cropped area of the district is under multiple-cropping and cropping intensity of the district is 178. During the last 20 years agriculture has undergone a sea-change. New farming technology associated with high-yielding varieties of seed, irrigation and fertilizers have come to stay. Wheat and potato, which were unknown to the farmers some twenty years ago, have become two of the five principal crops. Table 7 gives production figures of boro rice, wheat and potato, along with those of the traditional crops of aus and aman rice and jute in Hooghly district for twenty-one years.

Among the traditional crops production of jute is crucially dependent on the market price which is subject to frequent fluctuation; which is why the production of jute does not show an increasing trend. Aman rice, another traditional crop, has registered a considerable increase during this period. Production in 1980-81 was 44.7% more than the corresponding 1960-61 figure. Aus rice shows a distinct rising trend and production of 1980-81 showed a more than 136% rise over its 1960-61 figure. Boro rice, wheat and potato have recorded phenomenal rise during all these years. From 1967-68 a revolutionary change has occurred in boro production 1968-69 was the beginning of spectacular rise in production of wheat and potato. In Table 8, we give the index numbers of area and productivity of aus, with reference to the base year 1956-57. In the increase in area and productivity and consequently in production, irrigation and fertilizers have played a major role. Some data regarding irrigated area and use of chemical fertilizers in the district, to show their extent of growth are given in Table 9.

Table 10 shows the principal crop-wise irrigated area for nine years and brings to notice that the irrigated area under boro rice (reflected in the production figures of Table 7), jute and potato has increased remarkably. The increase in irrigated areas could have been shown to be more remarkable if we could procure data of a few more years back.

All the information on agriculture of the district lead to the

*Source : Principal Agricultural Officer, Hooghly.

conclusion that the district has prospered in agriculture by adopting new technology, new crops and crop-rotation and extending area of cultivation, and all these have resulted in increased productivity and production, which in turn have spilled over to the urban areas including Chandernagore.

Occupational pattern

At the outset of our analysis of occupational pattern, it can be noted that the percentage of working population to the total population has declined from 29.67 in the 1961 Census to 26.60 in the 1971 Census. According to the 1971 Census there are 9,364 persons employed in the secondary sector which includes manufacturing, processing, repairing, servicing (in both household and non-household industries) and construction, who account for 46.78% of the total working population. This percentage is an increase from the figure of 39.31 in 1961. In absolute number and percentage terms, the secondary sector is growing in importance in the occupational structure of the town. In the tertiary sector—which includes trade, commerce, transport, storage, communication and other services—the percentage of workers to the total working population has declined from 53.89 in 1961 to 50.85 in 1971. Even the absolute number has declined from 10,731 to 10,179. Working in the primary sector is insignificant in the occupational pattern of the town, though the percentage of people employed in this sector had increased from 1.77 in 1961 to 2.50 in 1971.

Economic activity

The census data on occupational structure of a town does not necessarily reveal the nature of economic activity of the town, because many people go elsewhere for work. While others commute to the town from other places. To have an idea about the economic activity of Chandernagore the records of the Licensing Department of Chandernagore Municipal Corporation were gone through. Of the 22 wards we could procure the establishment data of 10 wards, including wards 9 and 10, the two most important trading and commercial areas. Table 11 gives a summary of the data.

The data correspond to the year 1980-81. The first category—the secondary sector—comprises small-scale manufacturing units engaged in processing, repairing and servicing. There is only one

large-scale industrial unit—Gondalpara Jute Mill—in the town. Among the items manufactured in the small-scale sector the single largest item is wooden furniture. Though in the Census of 1971 it has been stated that the third most important item manufactured in this town is handloom cloth, no evidence of this is found in the records of the Licensing Department of the Corporation. Only a few small handloom weavers operate in the town. A medium scale handloom co-operative with 24 looms operates in Khalisani, an adjoining village just west of Chandernagore town. This observation is corroborated by the Mayor, Deputy Mayor and Chief Executive Officer of the Corporation and the Sub-divisional Officer of Chandernagore.

The major activities of the town are in the tertiary sector. Most of the units in this sector are petty traders of different types of consumer goods. Suppliers and dealers of construction material and transport operators occupy a fair number. In the town there were 1,037 licensed cycle-rickshaws and 337 rickshaw vans in 1982-83; in 1980-81 these figures were 902 and 318 respectively.

The information (given in Table '11) on establishments throws some light about the economic activity of the town. No firm idea about the size or otherwise of the relative importance of the units can be got. To have some more insight into this the register of shops and establishments in the office of the Regional Supervising Inspector, Shops and Establishment, Chandernagore was explored. Therefrom the following emerged : the number of shops and establishments was 2,317, which employed 1,925 workers. Here shops and establishments include shops, hotels, restaurants, commercial firms, cinemas etc. and do not include the owners of shops and establishments. So from the above two figures, an impression about the establishments in the tertiary sector and the employment therein can be got. Assuming that each establishment has one separate owner (no more no less) the total number of employed persons in the tertiary sector comes to 4,242. Actual employment should of course be more than this because many of the establishments are multi-partnered concerns while some persons might own more than one establishment.

Institutional finance plays a vital role in revitalizing the priority sectors of the economy. The State Bank of India, Chandernagore branch—is the most important bank operating in the town. Six other banks have their branches in Chandernagore. The State Bank of

India did not provide the data about deposits but gave us corroboration regarding the financial assistance rendered by it to industry and trade. This information gave the impression that bank finance has not yet assumed a significant role in the economic life of the town. The data on financing by the State Bank of India in Chandernagore is given in Table 12. It shows how little assistance has so far been received from the banks to finance industrial development—on average 6 units and Rs. 1.5 lakhs per year.

The D.R.I. (Differential rate of interest) scheme of the Bank helps the weaker sections of the population. Under this scheme the Bank has helped 400 petty traders from 1972 till date. The beneficiaries of this scheme have been cobblers, tailors, chanachur makers, ready-made garment seller, vegetable seller, banana seller, fish vendors, hair cutters, sweetmeat vendors and the like. Beside the picture given above of the term loan granted by the Bank, from 1973 to 1978, 84 rickshaws have been financed (term loan)—the loans sanctioned varying from Rs. 600 to Rs. 900 per rickshaw. State Bank (and for that matter any other bank) does not normally grant agricultural loans. The responsibility of disbursing the same lies with S.B.I. Tarakeswar and Arambag branches. So the flow of bank finance to agricultural activity of the rural hinterland from Chandernagore is nil.

Linkages with the rural area

The dependence of the surrounding rural areas on the town is mainly for cultural and sports activities and administrative exigencies, Chandernagore being the headquarters of the sub-division. The renowned festival of Jagaddhartri Puja attracts a very large number of people from the rural area and from other nearby towns on both sides of the river. Another important link of the town with the rural hinterland is the Bowbazar agricultural wholesale market just West of Chandannagar rail station. The entire need of farm products of the town is met by this wholesale market, which constitutes a crucial linkage. The President of the Khalisoni Gram Panchayat reported that over the last few years there had been a significant improvement in farming techniques, particularly in the use of modern inputs and changing cropping pattern, but these are in no way related to Chandernagore town. Linkage of the rural areas in this respect is more directly with Calcutta.

Linkage with the metropolitan city

Chandernagore, like any other town along the banks of Hooghly, is dependent on the metropolitan city of Calcutta to a very large extent for job, education, trade, commerce, medical services and various other callings. Eastern railways and Grant Trunk Road provide the link with Calcutta. As also Hooghly river for goods transportation. The relative importance of railways has increased tremendously after electrification in 1957. An idea about movement of men and material by the railways can be reached by looking at the records of the Chandernagore Station Master's Office. The sale of daily tickets has decreased somewhat in 1980 as compared with 1973. This, according to the station staff, is due to successive rises in rail fare, though the number of season tickets sold has recorded an increase during the period. This is an indicator of the importance of daily commutation from the town. The figures of ticket sale are given in Table 13.

As regards the movement of goods a picture of the movement through railways is given in the Table 14.

From 1969 to 1972 the inward traffic rose steadily, but then it fell sharply, by 1 lakh quintals in 1973. In 1974 there was a further decline because of the railway strike in that year. From 1978 to 1980 the inward traffic had dwindled fairly steeply. When questioned about this decline in the last three years, the station staff of Chandernagore said un-officially that the declining service quality of the railways, like pilferage, damage, untimely delivery etc. were the main reasons for this, and, inspite of the rise in oil prices and the resultant rise in the cost of road transport, traders are depending more and more on roads for transporting goods. According to the 1971 Census, the most important commodity imported to Chandernagore was raw jute meant for the only jute mill of the town. But this is not reflected in the traffic through Chandernagore Station, because both the import of raw jute and the export of jute goods (the most important item exported from Chandernagore) are done through the nearby Bhadreswar rail station, as well as by road and river transport. The single most important item coming to Chandernagore by rail is timber for the furniture manufacturing industry. But, these days, a fair amount of timber is also being moved by road and water. After timber, all sorts of consumer goods occupy an important position in the inward traffic. As regards outward traffic by rail, it is perhaps needless to point out (as revealed in the

Table 14 that it is relatively of much less importance than the inward traffic. Compared to railways, goods' movement by roadways has assumed an important position and its role is increasing fast. In addition, a small portion of total goods traffic to Chandernagore (particularly the supply to its grocery shops from Calcutta and supply of jute goods to Calcutta) takes place through the river. However, no information about road and river movement of goods could be got.

An important index of linkages of a town with the outside world is money remittance. We give in Table 15 the in-and-out-remittances of Chandernagore by Postal Money Orders. The data on postal money orders for the last five years only is shown in Table 15. A time series data over a longer period would have been much more useful. But still some idea emerges about the linkages from those data. The data show that in-remittance (M.O. paid) of the town is less than out-remittance (M.O. issued) for all the five years, though the difference is not large. According to the Post-Master, the fall in out-remittance is due to the rising charges for postal money orders and people are sending money by other means. If rising charges would have been the cause a similar trend would have been reflected in the in-remittance figures too.

Municipality

Now about the municipality. The civic amenities and civic administration provided by the Chandernagore Corporation are far superior to those provided by the other nearby municipalities. Water supply, drainage, sewerage and conservancy, roads and education are provided and maintained at a reasonably satisfactory level. Some instances are cited. The modes and quantity of water supply are shown in Table 16. Taking the 1971 population figure of the town, the filtered water supply per day per capita comes to 107.37 litres. To provide this amount the corporation had to incur an expenditure of Rs. 7,87,000 in 1979-80, compared to the expenditure on this head of Rs. 1,35,000 in 1964-65.

There are 30.1 kilometres of metalled and 47 kilometres of kutcha roads in the town. The major roads are wide, straight and well laid out, and many of them are with footpaths which are rarely seen in the municipal towns of West Bengal. Roads are well maintained and clean.

There are 117 kms of kutcha surface drains, 40 kms of pucca

drains and only 4 kms of underground drains at present in the town. C.M.D.A. is presently constructing underground sewerage in a few areas. Only 3,800 holdings of the township have sanitary latrines and the rest of the 15,240 holdings have service privies. The pace of conversion of service privies into sanitary ones by the C.M.D.A. is not satisfactory. The expenditure on drainage had increased eight times and by Rs. 5 lakhs from Rs. 70,000 in 1964-65 to Rs. 5,70,000 in 1979-80.

Chandernagore Corporation is the only local body in West Bengal upon whom the management of the secondary education along with primary education has been vested through enactment. Four century-old secondary (higher secondary) schools, one junior high school, one English medium high school, nine primary schools and one art school are managed by the Corporation. There are, in addition, seven secondary schools, five junior secondary schools and two other schools and one government degree college in the town. Several of these schools are noted for their outstanding performances in the public examinations. The expenditure incurred by the Corporation on this account has gone up to Rs. 27,14,000 in 1979-80 from Rs. 7,30,000 in 1964-65.

The standard of public health and convenience maintained is on the better side as compared with other municipalities nearby. Garbage disposal, night-soil clearing, road cleaning, vaccination are performed very promptly. The expenditure on this head has risen sharply from Rs. 2,83,000 in 1964-65 to Rs. 23,56,000 in 1979-80. This is telling on the coffers of the Corporation. But the people in general are satisfied with the services rendered by the Corporation.

The most important source of self-income of a local body is the property tax. The uses to which the houses are put also indicate 'the nature of economic activity of a town. The 1961 Census (Table 17) shows that out of a total number of 17,953 Census houses 1,674 (i.e., 9.32%) are used for manufacturing, trading and different business purposes. Still 130 more are used for these purposes along with their use as dwellings. And the largest number 13,492 (i.e., 75.15%) are used for residential purposes. 0.64% of the houses are put to educational purposes. This data about houses could have been used more fruitfully had there been information on the houses in the subsequent Census. But the 1971 Census only provide data on housing upto the district level.

Regarding finance, the position of the Corporation is no better than that for most of the municipalities of West Bengal. An account of receipts and expenditures of the Corporation over several years is shown in detail which shows that the internal revenue earned by the Corporation from property and other taxes, license fees etc. is hopelessly inadequate to maintain the establishment and public utility services. As an instance, property tax has increased by 195% from 1964-65 to 1979-80 and other taxes have risen by 250% during the same period, while expenditure on public health and convenience has gone up by 732%, and that on general administration by 322% and on education by 271%. More instances to show that the Corporation is always in the reds are needless and the development work can only be undertaken with the grant received from the government (Table 18).

Most of the grants (excepting the share of octroi tax and the surcharge on M.V. Taxes) are ad-hoc in nature. As a result nothing like planning for development exists in the Corporation. When an intimation of a certain grant comes from the Local Government and Urban Development Department of West Bengal, the Corporation prepares and submits schemes to the latter. In other words, the initiative for development activities rests with the State-government and not the municipal corporation.

Table 1
Population of Chandernagore : 1941-1981

| Year | Population | Percentage variation |
|------|------------|----------------------|
| 1941 | 38,284 | 30.4 |
| 1951 | 49,909 | 30.4 |
| 1961 | 67,105 | 34.5 |
| 1971 | 75,238 | 12.11 |
| 1981 | 1,01,568 | 34.99 |

Source : *Census of India* of relevant years.

Table 2
Urban Population Growth in Hooghly District : 1941-1971

| | Urban population of Hooghly district | Percentage variation |
|------|---|----------------------|
| 1941 | 3,21,193 | — |
| 1951 | 3,94,839 | 22.93 |
| 1961 | 5,79,283 | 46.71 |
| 1971 | 7,60,270 | 31.24 |

Source : *Census of India* of relevant years.

Table 3
Immigration and Emigration : 1931-1951

| Year | Immigration | Emigration |
|------|-------------|------------|
| 1931 | 12,611 | 261 |
| 1941 | N.A. | N.A. |
| 1951 | 14,833 | 12,542 |

Source : *Census of India* of relevant years.

Table 4
Factory (registered) Employment in Hooghly District

| Year | Employment | Year | Employment |
|------|------------|------|------------|
| 1959 | 64,811 | 1969 | 85,633 |
| 1960 | 69,634 | 1970 | 83,984 |
| 1961 | 72,888 | 1971 | 85,008 |
| 1962 | 81,285 | 1972 | 90,858 |
| 1963 | 88,542 | 1973 | 96,176 |
| 1964 | 97,178 | 1974 | 95,267 |
| 1965 | 93,853 | 1975 | 95,889 |
| 1966 | 93,192 | 1976 | 96,790 |
| 1967 | 91,589 | 1977 | 95,203 |
| 1968 | 90,752 | 1978 | 97,371 |
| - | - | 1979 | 1,02,786 |

Source : Chief Inspector of Factories, West Bengal.

Table 5
Number of Registered Small Industries

| Year (As on end of March) | Total number of registered small scale industries unit |
|------------------------------|---|
| 1973 | 944 |
| 1974 | 1,563 |
| 1975 | 4,796 |
| 1976 | 5,109 |
| 1977 | 5,338 |
| 1978 | 5,738 |
| 1979 | 6,440 |
| 1980 | 7,091 |
| 1981 | 7,783 |

Source : District Industries Centre, Chinsurah.

Table 6
Small Industries, Number, Employment and Capital

| Year | New Units Started | Employment Generated | Fixed Capital (Rs.) |
|---------|-------------------|----------------------|---------------------|
| 1971-72 | 111 | 535 | 16,51,403 |
| 1972-73 | 92 | 468 | 8,32,380 |
| 1973-74 | 141 | 648 | 9,87,635 |
| 1974-75 | 126 | 580 | 9,99,491 |
| 1975-76 | 180 | 809 | 42,14,696 |
| 1976-77 | 179 | 764 | 34,97,198 |
| 1977-78 | 81 | 348 | 28,00,000 |
| 1978-79 | 460 | 1,392 | 52,40,000 |
| 1979-80 | 289 | 1,741 | N.A. |
| 1980-81 | 378 | 1,900 | 79,09,642 |

Source : District Industries Centre, Chinsurah.

Table 7
Production of Principal Crops in Hooghly District
(Thousand Tonnes)

| Year | Rice (Aus) | Rice (Aman) | Rice (Boro) | Wheat | Jute | Potato |
|---------|------------|-------------|-------------|-------|-------|--------|
| 1960-61 | 13.3 | 262.6 | 3.9 | 0.2 | 225.5 | 217.8 |
| 1961-62 | 5.3 | 203.3 | 2.7 | 0.3 | 425.4 | 324.4 |
| 1962-63 | 5.7 | 203.9 | 0.4 | 0.2 | 436.9 | 354.4 |
| 1963-64 | 4.4 | 262.0 | 1.0 | 0.2 | 375.2 | 180.6 |
| 1964-65 | 7.4 | 236.9 | 1.4 | N.A. | 425.8 | 293.1 |
| 1965-66 | 9.3 | 225.6 | 2.3 | 0.2 | 233.3 | 311.6 |
| 1966-67 | 9.6 | 155.2 | 3.7 | 0.6 | 191.0 | 202.6 |
| 1967-68 | 15.1 | 207.8 | 25.9 | 3.0 | 522.0 | 88.0 |
| 1968-69 | 21.2 | 265.7 | 38.0 | 18.6 | 107.7 | 297.3 |
| 1969-70 | 13.0 | 303.4 | 45.5 | 30.2 | 342.6 | 193.7 |
| 1970-71 | 14.0 | 190.1 | 87.7 | 53.0 | 293.7 | 282.6 |
| 1971-72 | 15.1 | 205.3 | 211.8 | 57.2 | 334.4 | 408.2 |
| 1972-73 | 34.8 | 238.6 | 117.6 | 38.2 | 179.1 | 324.6 |
| 1973-74 | 29.7 | 210.8 | 130.4 | 28.6 | 294.4 | 283.2 |
| 1974-75 | 41.3 | 239.6 | 155.2 | 37.3 | 291.3 | 485.6 |

Table 7 (Continued)

| | | | | | | |
|---------|------|-------|-------|------|------|-------|
| 1975-76 | 28.6 | 315.2 | 143.7 | 61.8 | N.A. | 448.8 |
| 1976-77 | 27.5 | 270.3 | 121.9 | 62.3 | N.A. | 441.2 |
| 1977-78 | 40.2 | 324.8 | 133.5 | 43.6 | N.A. | 567.9 |
| 1978-79 | 25.7 | 242.5 | 185.8 | 34.0 | N.A. | 744.4 |
| 1979-80 | 12.7 | 245.8 | 77.0 | 33.4 | N.A. | 488.3 |
| 1980-81 | 31.4 | 379.6 | 149.7 | 25.3 | N.A. | 734.2 |

Source : Government of West Bengal-Bureau of Applied Economics and Statistics, *Statistical Abstract*; Office of the Principal Agricultural Officer, Hooghly.

Table 8

Index Number of Agricultural Area and Productivity in Hooghly District (Base : Crop Year 1956-57=100)

| Crop | 1960 - 1961 | | 1969 - 1970 | | 1974 | 1975 |
|--------|-------------|--------------|-------------|--------------|---------|--------------|
| | Area | Productivity | Area | Productivity | Area | Productivity |
| Aus | 140.7 | 87.5 | 147.7 | 81.5 | 300.0 | 127.5 |
| Boro | 266.7 | 132.9 | 1,416.7 | 292.0 | 4,941.7 | 285.6 |
| Wheat | 50.0 | 133.4 | 2,200.0 | 457.6 | 2,933.3 | 423.9 |
| Potato | 113.0 | 151.9 | 102.1 | 149.5 | 157.5 | 243.0 |

Source : Government of West Bengal, Bureau of Applied Economic and Statistics, *Statistical Abstract*, 1975.

Table 9

Consumption of Fertilizer in Hooghly District (Tonnes).

| Year | Nitrogen | Phosphate | Potash | Total |
|---------|----------|-----------|--------|--------|
| 1971-72 | 7,578 | 1,846 | 559 | 9,983 |
| 1972-73 | 7,604 | 2,943 | 3,562 | 14,109 |
| 1973-74 | 6,897 | 1,909 | 2,752 | 11,558 |
| 1974-75 | 11,356 | 2,111 | 1,528 | 14,995 |
| 1978-79 | 18,046 | 7,111 | 6,123 | 31,280 |
| 1979-80 | 20,049 | 8,910 | 3,273 | 32,232 |
| 1980-81 | 14,412 | 8,415 | 3,103 | 25,930 |

Source : Government of West Bengal, Bureau of Applied Economics and Statistics, *Statistical Abstract*, 1975; Office of Principal Agricultural Officer, Hooghly.

Table 10
Irrigated Area (acres) in Hooghly District

| Year | Aus | Aman | Boro | Jute | Wheat | Potato |
|---------|--------|----------|----------|--------|--------|--------|
| 1972-73 | 22,919 | 1,11,000 | 13,690 | 19,053 | 46,738 | 52,530 |
| 1973-74 | 21,492 | 4,35,607 | 1,47,000 | 27,387 | 35,015 | 50,192 |
| 1974-75 | 30,098 | 2,28,566 | 1,46,572 | 18,000 | 43,465 | 55,019 |
| 1975-76 | 33,899 | 2,52,517 | 1,27,632 | 11,233 | 66,254 | 56,400 |
| 1976-77 | 28,349 | 2,75,719 | 92,607 | 14,401 | 67,829 | 62,805 |
| 1977-78 | 28,629 | 2,60,538 | 1,10,805 | 20,000 | 45,036 | 73,750 |
| 1978-79 | 2,505 | 1,95,158 | 1,56,630 | 20,720 | 42,570 | 93,145 |
| 1979-80 | 16,380 | 2,16,250 | 73,756 | 12,577 | 45,000 | 65,865 |
| 1980-81 | 23,355 | 2,30,000 | 1,27,300 | 31,440 | 32,145 | 80,944 |

Source : Office of Principal Agricultural Officer, Hooghly.

Table 11
Licensed Units by Activities : 1980-81

| Description of activities | Number of Units |
|--|-----------------|
| Manufacturing, Processing, Repairing, Servicing etc. | 590 |
| Trade, Commerce, Transport, Storage, Communication, Construction etc. | 1,258 |
| Other Services | 262 |

Source : *Chandernagore Municipal Corporation.*

Table 12
Loan given by the State Bank of India : 1974-79

| Year | Term loan to small scale industries (Rs.) | Working capital to small scale industries (Rs.) | Working capital to small traders (Rs.) |
|------|--|--|---|
| 1974 | 1,665 (1) | — (0) | 3,000 (1) |
| 1975 | 22,500 (1) | 5,000 (1) | 7,000 (1) |
| 1976 | 26,454 (3) | 11,600 (2) | 4,000 (1) |
| 1977 | — (0) | 14,400 (4) | 17,000 (2) |
| 1978 | 67,554 (3) | — (0) | 25,000 (2) |
| 1979 | 2,13,861 (11) | 1,04,460 (7) | 5,000 (1) |

Note : Figures in brackets give the number of units helped.
Source : State Bank of India, 1983.

Table 13
**Tickets Sold from Chandernagore Railway Station :
1979-80**

| Year | Number of daily tickets sold per month | Number of season tickets sold per month |
|------|---|--|
| 1973 | 1,52,109 | 3,778 |
| 1974 | 1,59,992 | 3,877 |
| 1975 | 1,99,720 | 4,636 |
| 1976 | 1,08,719 | 5,612 |
| 1977 | 1,03,121 | 6,835 |
| 1978 | 1,47,690 | 5,907 |
| 1979 | 1,47,478 | 5,371 |
| 1980 | 1,45,882 | 5,167 |

Source : Station Master's Office, Eastern Railway Chandernagore Station.

Table 14
Quantity of Goods Passing through
Chandernagore Station

| Year | Inward Traffic (Quintals) | Outward Traffic (Quintals) |
|------|---------------------------|----------------------------|
| 1969 | 1,95,782 | 10,034 |
| 1970 | 2,06,105 | 5,139 |
| 1971 | 2,17,130 | 6,320 |
| 1972 | 2,34,982 | 14,626 |
| 1973 | 1,36,511 | 5,598 |
| 1974 | 84,502 | 2,458 |
| 1975 | 1,28,010 | 1,578 |
| 1976 | 2,52,785 | 1,074 |
| 1977 | 1,68,589 | 10,690 |
| 1978 | 78,852 | 15,118 |
| 1979 | 18,854 | 906 |
| 1980 | 21,956 | 1,287 |

Source : Ibid.

Table 15
In-and-out-remittances (through Money Orders)

| Year | Money Order Issued (Rs.) (Av. monthly) | Money Order Paid (Rs.) (Av. monthly) |
|------|---|---|
| 1977 | 2,58,330 | 2,05,766 |
| 1978 | 2,48,931 | 1,79,475 |
| 1979 | 2,34,438 | 1,84,200 |
| 1980 | 2,22,447 | 1,88,520 |
| 1981 | 2,21,010 | 2,16,296 |

Source : Post-Master, Chandernagore.

Table 16
Water Supply in Chandernagore Corporation Area

| Types of Water Supply | Litres per day (filtered) |
|----------------------------|---------------------------|
| Piped Supply to Households | 64,37,600 |
| To Street Taps | 16,34,400 |
| Truck Delivery | 3,600 |
| Shallow Tubewells | 3,000 |

Source : Chandernagore Municipal Corporation.

Table 17
Uses of Houses in Chandernagore in 1961

| Description of uses etc | Number of Houses |
|---|------------------|
| Total number of houses | 17,953 |
| Census houses vacant at the time of house listing | 1,642 |
| Dwellings | 13,492 |
| Shops cum dwellings | 112 |
| Workshops cum dwellings | 18 |
| Hotels, sarais, dharmasala, tourist home and inspection houses | 48 |
| Shops (excluding eating houses) | 1,056 |
| Business houses and offices | 108 |
| Factories, workshops and worksheds | 449 |
| Schools, other educational institutions including training class and coaching class | 115 |
| Restaurants, sweetmeat shops and eating places | 13 |
| Places of entertainment and community gathering places | 46 |
| Public health and medical institutions, hospitals, health centres, doctors clinic, dispensaries | 78 |
| Others | 776 |

Source : *Census of India, 1961.*

Table 18

Income and Expenditure of Chandernagore Municipal Corporation (Figures in Lakhs)

A. Income

| Year | Tax Revenue | Revenue from properties and powers apart from taxation | Government Grant | Loans and Advances | Other Sources | Total |
|---------|-------------|--|------------------|--------------------|---------------|-------|
| 1964-65 | 5.25 | 1.65 | 9.09 | - | 2.86 | 18.85 |
| 1966-67 | 5.37 | 2.18 | 5.10 | - | 6.36 | 19.01 |
| 1972-73 | 11.81 | 2.12 | 29.95 | - | 4.38 | 48.26 |
| 1975-76 | 14.76 | 4.06 | 25.78 | 0.50 | 11.07 | 56.17 |
| 1977-78 | 13.39 | 4.96 | 31.50 | - | 5.51 | 55.36 |
| 1978-79 | 11.71 | 4.26 | 53.03 | 3.00 | 3.85 | 75.85 |
| 1979-80 | 18.40 | 4.88 | 54.90 | - | 19.73 | 97.91 |

B. Expenditure

| Year | Public Health and Convenience | General Administration and Collection charges | Education | Water Supply | Drainage | Lighting | Other | Total |
|---------|-------------------------------|---|-----------|--------------|----------|----------|-------|-------|
| 1964-65 | 2.83 | 1.51 | 7.30 | 1.35 | 0.70 | 0.49 | 2.74 | 16.92 |
| 1966-67 | 5.03 | 1.82 | 4.20 | 1.25 | 0.36 | 0.54 | 6.27 | 19.47 |
| 1972-73 | 14.47 | 4.57 | 18.60 | 3.51 | 2.13 | 1.01 | 4.52 | 48.81 |
| 1975-76 | 12.72 | 8.58 | 18.04 | 4.12 | 2.46 | 1.05 | 7.40 | 54.37 |
| 1977-78 | 13.51 | 5.40 | 22.44 | 4.57 | 3.41 | 1.68 | 4.72 | 55.13 |
| 1978-79 | 15.27 | 5.23 | 23.25 | 5.33 | 3.60 | 1.19 | 14.60 | 68.47 |

Source : Chandernagore Municipal Corporation.

MALDA : A SERVICE AND TRADING TOWN IN A BACKWARD RURAL REGION

Nandita Bhattacharyya

I Introduction

The district of Malda came into existence in 1813 with parts of the then Dinajpur, Purnea and Rajshahi districts. The area had a well developed tradition of urbanism during the pre-colonial period. When modern urbanization was introduced, specially under the British rule, it had its initial impact on traditional urbanism. Old Malda's importance began to wane after the establishment of the town of English Bazar (1680) by the British East India Company. Popularly known as Malda, by 1869 it became a municipality, one of the oldest in the State. Being the headquarters of the southern-most district of North Bengal and lying almost mid-way from Calcutta to Siliguri, Malda is known as the gateway of North Bengal and Eastern India. At present the town of Malda provides two contrasting appearances : a modern town with a stadium, glittering shops and a swimming pool and slum areas without the minimum sanitary or drinking water facilities.

II Historical outline

The origin of the town can be traced back to 1680, when the traditional manufacture of good quality cotton and silk textiles attracted the British, Dutch and French companies to the area. In that year, a plot of land along the river Mahananda was purchased by the British in the village Mookdumpur to erect a factory. The settlement which grew around it was subsequently named Englezabad by the British from which the name English Bazar was subsequently derived. The old town of the area is now referred to as old Malda . Until the 1780's the procurement of goods, mainly textiles for export through Indian merchants was the primary concern of the company². This system of procurement was eventually replaced by a new one in which the commercial residents of the company made direct advances to the weavers. The Indian merchants were thus

denied access to the Company's commercial transactions. At that time the Company's investment through the Malda factory amounted to £ 50,000 annually.

In the year 1810, 4,000 looms were employed in the manufacture of silk cloths. There were 120 houses of weavers who used to make thin muslins at Malda and in its immediate vicinity. A good number of muslim women, known as Butadars, were engaged in embroidering work on cotton cloths. The businessmen supplied cloth to these women and paid wages for their labour. Another important industry was dyeing of cotton and silk thread³. M.O. Carter (1939) also noted the existence of lac industry. He found that lac cultivation had considerably declined after the world war of 1914-18 and was facing total extinction. By now the industry has practically ceased to exist in the district⁴.

It has been stated by some old and knowledgeable citizens of the town that a sizeable population in the town were earlier engaged in building boats. The district was intersected by a network of rivers and in the rainy season, when travelling by land was nearly impossible, water-ways were the only means of communication with the outer world. These boat-carpenters lived in the Laxmighat area of the town. In the first quarter of the present century, 20 houses were engaged in the brass and bell metal industries in the Kutubpur area of the town.

In the original settlement of the town, the Hindus and the Muslims were equal in number. These two communities lived in peace and harmony and maintained relations in both cultural and social affairs. The existence of a mosque by the side of temple of Goddess Kali at the heart of the original settlement would confirm this.

III The growth of the town

Here, both of the two municipalities, located at a distance of seven kilometres from each other—English Bazar and Old Malda—have been treated as a single urban area considering their continuity of urban characteristics, communication and economic interdependance of functions. These had been the only two urban areas of the district until 1981 when two more urban settlements—at Jhali Jhalia (5650) and Jagannathpur (3952) were identified. The urban agglomeration of English Bazar includes three towns—Old Malda, Jhali Jhalia and English Bazar. Table 1 gives the percentage variations in population figures for the Malda district as a whole for

eight decades from 1901. In addition, growth rates for both rural and urban population have been separately given.

In the decade 1901-1910, the rate of growth of the rural population was much higher than that of the urban population. While in the next decade (1911-1920), there was an absolute decrease in both rural and urban population; the rate of decrease being much higher for the urban population. In the following decade (1921-1930), while the growth of rural population was only 4.75% the urban population grew more substantially to the extent of 14.44%. The next decade (1931-1941) witnessed a fairly rapid growth of both rural and urban population; but during 1941-51, the rates of growth of both rural and urban population decreased in comparison with the previous decade. However, both the urban and the rural population grew rapidly over the next three decades, the former at a somewhat faster rate, induced by the population movement across the international border.

Table 2 presents a comparative picture showing percentage variation in urban population of Malda and in the state of West Bengal. It shows that urban Growth has been faster in Malda district.

We may draw a distinction between the rate of urban growth and the change in the level of urbanization. While the former indicates percentage decadal increase or decrease in the urban population, the latter signifies percentage decadal increase or decrease in the proportion of urban population to the total population⁵.

Table 3 shows that the level of urbanization at about 5% is exceedingly low, in fact the lowest among the districts of West Bengal. Besides, it indicates a virtual stagnation in urban growth over the past three decades. While the number of inhabited villages in the district is 1611, the number of urban centres in the district is only 2. The former covers an area of 3,705.2 sq. km. while the latter constitutes only 7.8 sq. km., that is about one-fifth of one percent of the total area in the district.

Table 4 gives an idea about the respective growth of urban population in English Bazar and Old Malda, which shows that while English Bazar grew significantly, since the beginning of this century, Old Malda's growth was small.

Over the entire period of eight decades from 1901, while English Bazar urban agglomerations population registered a five-fold increase, old Malda could record only slightly more than doubling its population. The growth of population in Old Malda was quite

slow until 1961-71 (except for 1931-41). Over the past two decades the growth of population in Old Malda has been significant, and comparable with that for English Bazar Urban Agglomeration as a whole. Taking the latter into account, its rate of growth has been substantial since 1931, and comparable with urban growth elsewhere in the State.

IV Factors promoting the growth of Malda town

According to the 1981 Census only 4% of the total working population of the town are engaged in the secondary sector. This indicates the relative insignificance of the sector in the totality of economic activities of the town. Traditional cotton textile industry is confined mainly within the rural areas of Kaliachak and English Bazar. Only a very small quantity of silk produced in the district is consumed by the local silk weavers. Lack of infrastructural facilities has impeded the growth of modern industries. It has been estimated by the Census of 1971 that per capita consumption of power in Malda was only 3.7 kws. in 1970-71, compared to 106.0 kws. for West Bengal. While the power situation has somewhat improved since, this is by no means satisfactory. In absence of marked industrial activities, the town has grown up as a service centre; according to the 1981 Census, 91% of the total working population are engaged in the tertiary sector.

Apart from the natural growth of population, several factors may be held responsible for the growth of urbanization in the district of Malda since 1901. For the purpose of our analysis we may broadly divide these factors into three distinct categories viz., natural, social and economic. As for the first, natural calamities, particularly severe flood, acute draught, earthquake, hailstorm etc. were responsible in the early decades of the present century for the large influx of rural people into the town. A large number of families were also forced to migrate from the rural area owing to erosions caused by rivers.

As for the social and cultural factors, according to the District Gazetteer of Malda, the posting of a Joint Magistrate and Deputy Collector was necessitated by the heavy incidence of crimes in certain thanas (police stations) of the district when it was initially established by the British in 1813. Though gang robbery was rare, the number of burglaries reported was enormous. Old houses of the town were specially built to prevent theft and burglaries.

Prior to the partition of India, there were only seven high schools in the district, of which two schools were within the municipality

area. The town of English Bazar had facilities for the education of both boys and girls, and a college was established in 1944. Attracted also by these better educational facilities many well to do families—mostly owners of mango orchards, money lenders and jotedars—maintained additional establishments in the town especially for the education of their children.

In the post-independence period, large influx of refugee from East Pakistan also contributed to the growth of population. We can get an idea about the extent of migration into the town in the decade 1961-71 from Table 5. Evidence shows that migration from the rural area into the town declined considerably in the decade 1961-71 in comparison with the previous decade (1951-61). This may be due to the fact that, with the development of roads and railway net work, the town became easily accessible and the villagers were no longer required to migrate to take advantage of the facilities offered by the urban centre. Now a days, a sizeable number of students at Malda commute daily from the rural areas.

The number of persons migrated from other districts of the state has increased in the decade 1961-71. The town being the head-quarter of the district, containing offices of different departments of the government, District Judges Court, Jail, District Hospital etc. it also attracts people from other districts of the state. A first hand survey shows that among the persons who had attained higher educational standards, particularly established doctors, legal practitioners, teachers etc., many were originally from the districts of Rajasahi, Pabna, Dacca and Burdwan.

Coming to the economic factors, both English Bazar and Old Malda have been important centres of commerce over a long period of time. According to W. W. Hunter, raw silk and cocoons, silk cloths, indigo, brass metal works, rice and other kinds of grain and pulses, fruits specially mango were the main articles of export from the district⁶ in the 1870s. The articles imported consisted of cotton cloths, jute, coconuts, salt-paper, oil, sal wood and spices of all kinds etc. The value of export was much larger than that of import. But, instead of this leading to a steady accumulation of capital within the district, most of the profit was remitted out by the traders most of whom were hailing from Bihar and Uttar Pradesh. Carter observed that during late twenties and early thirties, beside silk, mangoes and lac the district also exported paddy, rice, pulses, jute, oil seed and to a small extent tobacco. Both export and import trade were then conducted mostly by boats along the rivers.

After the partition of the country, the use of rivers for commerce has been somewhat constrained since, except Kalindri, all the other major rivers like, Mahananda, Tangon, Purnabhaha flow through Bangladesh before joining the Ganges. Nowadays, the principal means of communication are road and rail. The National Highway 34, while runs from Calcutta to Siliguri, passes via English Bazar (Malda). The railway station at Malda plays a significant role in respect of flow of goods and thus serves not only the district of Malda but also the district of West Dinajpur. According to the report received from the goods section of the railway station at Malda, the main items of export through railways are paddy, jute, timber, coal, railway goods and various products of mango. Similarly, the chief items of import are rice, wheat, salt, cement, coal, fertiliser, kerosene, diesel and different types of parcel. There are frequent bus and train services connecting Malda with both Calcutta and Siliguri.

The number of persons employed in the industrial sector is relatively insignificant. A number of rice mills, silk reeling units power generation units and wood processing units etc, are located in the urban area and have been registered under the Factories Act. Other industries worth mentioning are brick and tile making, leather foot-wear manufacturing, brass and bell metal units, oil ghani, shellac and P.C. pole. A decreasing trend has been noticed over time both in the number of registered factories and in the number of workers employed⁷. On the other hand, household small scale industries viz. blacksmithy, jewellery, tailoring, bicycle repairing, now play relatively a more significant role. Frequent work on river embankment, which is subject to periodic erosion, also attracts workers for construction and repairing.

In recent years, with increase in the number of educated unemployed, there has been a tendency among the young people of the district to get themselves registered as contractors under different government departments. Most of the young contractors, not having sufficient money of their own for investment, rely on mango garden owners for credit. After making quick money, this class of young people try to imitate the life style of the privileged few as projected by the Indian movies and literature. This is evident in the increasing number of show rooms of different costly consumer goods such as refrigerators, T.V., scooter and textiles products.

As the industrial sector of the urban area is not growing fast enough the tertiary sector has grown up significantly in order to absorb the growing labour force. As seen from Table 6, the tertiary

sector accounts for a higher proportion of bank advances than the secondary sector; though both are dwarfed by the advance given in the primary sector.

Another external factor, viz., the opening of Farakka bridge both for railways and road traffic in 1971 has made a significant contribution to growth. The bridge has increased the importance of the town both for the purpose of dwelling and for commerce. In addition, the steady growth of population of Farakka Barrage Township near Malda has increased the demand for commodities as well as services in the town of Malda. According to the 1981 Census, Farakka Barrage Township recorded a growth rate of 110.08 in the decade 1971-81.

We can get some idea of the increase in the financial transactions of Malda with rest of the country in the last two decades from the post offices. There were one Head post office, 12 sub-post offices and 158 branch offices in Malda district in 1961. The total value of money order issued during the month of October, 1961 by all the post offices in the district was Rs. 4,71,536 and the total money order paid during the same period was to the extent of Rs. 5,98,869⁸. Table 7 shows the present state of transaction indicating an increase in amount paid in. It shows that, while the amount involved in the money order issued remained more or less the same, the amount of money order paid in registered a 35.50% increase over the two decades.

V Rural-urban dichotomy

Prior to the partition of Bengal, there was an important business belt surrounding the town of old Malda, namely in Nawabgunj, Bachamari, Sahapur, Raipur etc. With the growth of English Bazar as a market place, the importance of this area began to wane. As the town of English Bazar has now become a market for selling the commodities produced in the rural area, its diversified demand structure has produced a distinct change in the cropping pattern in the rural area of the districts.

The river Mahananda divides the district into two equal parts. The area to the east of Mahananda is called Barind. West of Mahananda is again divided into two well defined parts by the river Kalindri, North of Kalindri is known as Tal area and in the south lies the most fertile and populous portion of the district known as Diara. The principal crops of Diara region are Aus paddy, wheat, barley, oats, mustard, sugar cane, Mango and mulberry. Previously the area contained a vast grazing ground for cattles along the Western and

Southern side of the district. The area was also vulnerable to frequent flood. The deposit of alluvial soil left by flood helped to produce pulses in large quantity, which was mainly used as fodder. Surplus milk produced in the area was sold to the wholesale dealers in milk who converted it into various milk products and sold it to the sweet-meat shops at Malda. Thus the town had sufficient supply of milk from the surrounding rural area which helped the sweet-meat shop business to flourish. But, after the partition, the situation gradually changed. With the growth of the population of the town, and the resulting growth in the demand for vegetables, the fallow land previously used as grazing ground came under vegetable cultivation. Thus, while the supply of vegetables from the rural area increased, this was at the cost of the supply of milk. Further, the embankment constructed along the river Ganges also prevented the deposit of alluvial soil necessary for the cultivation of pulses. This shortage in the supply of milk has affected the sweet-meat business in the town.

The quantity of fish produced in the district is large. In 1960 the value of fish exported by rail from the district amounted to Rs. 12,41,730⁹. However, the ecological change brought about by the construction of Farakka barrage has reduced the natural production of fish as the water surface has been gradually decreasing due to the deposit of silt. The reclamation of *beels* and swamps for agriculture is another reason for the reduction in the supply of fish and the consequent rise in the price of fish in the town. On the other hand, the increased demand for eggs and chicken by the fast growing population has encouraged the household poultry business in the rural area.

It has been estimated that in the decade 1951-61, the workers in the agricultural sector increased by 62.5% while the total cropped area in the district increased by only 13.3%. This reflected the lack of employment opportunities in the non-agricultural activities. In the absence of industrial activities, the informal sector of the town has emerged as the main provider of jobs to the surplus agricultural population. Taking the case of rickshaw pullers, according to a spokesman of the Malda municipality, 1400 rickshaws and 288 vans are licensed to ply within the municipal area. It has been reported that taking into account the unlicensed rickshaws, the number of rickshaws actually plying within the town is more than 3,000. From the applications sanctioned by the municipality, either seeking new licence or renewal of the old ones, we selected 125 applications at

random for a survey. The informations obtained from them is summarised in Table 8.

A sizeable number of rickshaw pullers, born in the rural areas of the district, came from the villages like Jadupur, Arapur, Kotowali, Sahapur etc. The distance of these places from English Bazar varies from 7 km. to 10 km. They live in the villages and go back to their villages every day after work. 32.8% of them have their own vehicles, while the rest operate on the basis of commission. Only 7.2% of the sampled rickshaw pullers have been financed by the bank. Apart from this transportation business, the surplus population in the rural area find employment in the brick fields or as daily labourers. A good number of rural women folk work as biri-binder on daily wage.

In order to get an idea about the type of relation which migrants of different income groups of the town keep with the surrounding villages sixty-seven persons have been interviewed. For the purpose of analysis we have divided them into four income-groups on the basis of their monthly income. Table 9. gives lists of occupations corresponding to monthly income categories.

Table 10 presents a comparative picture of the sample migrants regarding ownership of landed property in the rural area, their origin, and income levels.

No other district accounts for the migrants upto the income level Rs. 500. Refugees also account for a very large share. The table shows that the migrants maintain close links with the villages; those at higher income levels having more houses and land in the rural areas of the district than others.

People in the lowest income group are forced to move out of the villages because of poverty and in anticipation of getting employment in the informal sector of the town. They are usually landless or marginal farmers. Some of them are seasonal migrants who migrate into the town in search of employment in the informal sector during the lean agricultural season. In contrast, many of the people included in the higher income group were pulled into the town by the attraction of the urban facilities and comforts.

With the establishment of two colleges in the rural areas of the district—at Samshi and at Chanchol—the number of educated persons who move out to secure urban employment has increased. The student migrants return to their native villages after completing their education. But, since the villages can provide neither suitable employment opportunities nor any scope for the use of their acquired knowledge, many of them re-migrate after a time.

Table 1

**Percentage Variations of Population of Malda District
for Various Decades, (1901-1981)**

| Decade | Total | Rural | Urban |
|-----------|-------|-------|-------|
| 1901-1911 | 15.72 | 16.07 | 3.80 |
| 1911-1921 | -1.77 | -1.69 | -4.81 |
| 1921-1931 | 4.99 | 4.75 | 14.44 |
| 1931-1941 | 17.19 | 16.61 | 38.06 |
| 1941-1951 | 11.05 | 10.44 | 29.37 |
| 1951-1961 | 30.33 | 29.78 | 44.44 |
| 1961-1971 | 32.00 | 31.80 | 33.95 |
| 1971-1981 | 26.11 | 25.45 | 37.07 |

Source : *Census of India*, of various years.

Table 2

**Percentage Variation in Urban population in Malda
District and in the State of West Bengal**

| Decade | Urban Malda | Urban West Bengal |
|-----------|-------------|-------------------|
| 1901-1911 | 3.80 | 13.70 |
| 1911-1921 | -4.81 | 7.20 |
| 1921-1931 | 14.44 | 15.00 |
| 1931-1941 | 38.06 | 63.70 |
| 1941-1951 | 29.37 | 32.50 |
| 1951-1961 | 44.44 | 36.00 |

Table 2 (Continued)

| Decade | Urban Malda | Urban West Bengal |
|-----------|-------------|-------------------|
| 1961-1971 | 33.95 | 28.41 |
| 1971-1981 | 37.07 | 31.61 |

Source : *Census of India*, of various year.

Table 3

Rate of Urbanization in Malda District

| Year | Percentage of total population in urban area | Variation in urban population pro- portion | Percentage varia- tion in urban proportion |
|------|--|--|--|
| 1901 | 2.88 | — | — |
| 1911 | 2.58 | -0.30 | -10.42 |
| 1921 | 2.50 | -0.08 | -3.10 |
| 1931 | 2.73 | 0.23 | 9.20 |
| 1941 | 3.21 | 0.48 | 17.58 |
| 1951 | 3.75 | 0.54 | 16.82 |
| 1961 | 4.16 | 0.41 | 10.93 |
| 1971 | 4.21 | 0.05 | 1.20 |
| 1981 | 4.78 | 0.57 | 13.54 |

Source : *Census of India*, of various years.

Table 4
Population growth in English Bazar Urban Agglomeration and old Malda town,
1901-1981

| Year | English Bazar Urban Agglomeration† | | | | Old Malda Town | | | |
|------|------------------------------------|--------|--------|-----------|----------------|-------|--------|-----------|
| | Total | Male | Female | Variation | Total | Male | Female | Variation |
| 1901 | 17,410 | 9,388 | 8,022 | - | 3,743 | 2,074 | 1,669 | - |
| 1911 | 18,072 | 9,711 | 8,361 | 3.80 | 3,750 | 2,014 | 1,736 | 0.19 |
| 1921 | 17,202 | 9,545 | 7,657 | -4.81 | 3,145 | 1,676 | 1,469 | -16.13 |
| 1931 | 19,686 | 10,855 | 8,831 | 14.44 | 2,779 | 1,468 | 1,311 | -11.64 |
| 1941 | 27,118 | 14,879 | 12,239 | 37.75 | 3,845 | 2,064 | 1,781 | 38.36 |
| 1951 | 35,161 | 18,974 | 16,187 | 29.66 | 4,498 | 2,626 | 1,872 | 16.98 |
| 1961 | 50,785 | 27,110 | 23,675 | 44.44 | 4,885 | 2,615 | 2,270 | 8.60 |
| 1971 | 68,026 | 35,876 | 32,150 | 33.95 | 6,691 | 3,494 | 3,097 | 36.97 |
| 1981 | 93,244 | 48,397 | 44,846 | 37.07 | 8,579 | 4,380 | 4,199 | 28.22 |

†includes Old Malda.

Source : *Census of India*, of various years.

Table 5
Migration to Malda town : 1951-1971

| Country/State where born | 1951-1961, 1961-1971 | |
|---|----------------------|--------|
| (a) Born elsewhere in the district | 4,309 | 260 |
| (b) Born in other districts of the state | 2,965 | 3,310 |
| (c) Born in other states of India beyond the state of enumeration | 4,173 | 1,480 |
| (d) Born in other countries in Asia | 9,938 | 13,714 |

Source : *Census of India*, of various years.

Table 6
Relative Share of Bank Advances in the Primary, Secondary and Tertiary Sectors in the District of Malda, 1981

| Period | (percentages) | | |
|--|---------------|-----------|----------|
| | Primary | Secondary | Tertiary |
| (1) 1st quarter of 1981 i.e., from 1st January 1981 to 31st March 1981 | 68.5 | 11.0 | 20.5 |
| (2) 3rd quarter of 1981 i.e., from 1st July 1981 to 30th Sept. 1981 | 72.6 | 8.9 | 18.5 |

Source : Office of the District Development Officer, United Bank of India, Malda.

Table 7
Amount of Transaction through the Head Post Office of Malda, 1981

| Money order issued (Rs.) | | Money order paid (Rs.) |
|--------------------------|----------|------------------------|
| June, 1981 | 4,78,798 | 7,12,394 |
| October, 1981 | 3,75,663 | 8,11,490 |

Source : Office of the Superintendent of Post Office, Malda.

Table 8

**Distribution of sample rickshaw pullers according to
their place of birth**

| Place of birth | Percentage of rickshaw pullers |
|---|--------------------------------|
| 1. States other than West Bengal | 4.8 |
| 2. Bangladesh | 9.6 |
| 3. Within the district but not within the urban area | 36.0 |
| 4. Within the urban area | 49.6 |

Source : Sample survey by the author.

Table 9

Distribution of Occupations by Income Levels

| Income (per month) | Occupation |
|----------------------|---|
| Less than Rs. 200 | Vendor, Rickshaw-puller, Mill worker, Carpenter, Maid-servant, Labourer etc. |
| Rs. 200 to Rs. 500 | Primary school teacher, Grover, Owner of petty business, Central government employee, L.I.C. agent, State government employee, etc. |
| Rs. 500 to Rs. 1,000 | Pleader, Businessman, Teacher, Veterinary Doctor etc. |
| Rs. 1,000 and above | Contractor, Doctor, Pleader, Bank employee, Businessman, L.I.C. staff |

Table 10
Origin and Rural Links of Migrants by Income Groups

| Income Group (by monthly income) | Per cent of the sampled Incoming into the town from other districts of the states | Per cent of sampled who migrated from Bangla-desh | Owners of houses in the rural area of the district (percent) | Owners of landed pro-perty in rural area (percent) | Minimum and Maxi-mum area of land owned by the group |
|----------------------------------|---|---|--|--|--|
| Less then Rs. 200 | — | 46.2 | 40.0 | 33.0 | 1 Katha to 5 bighas |
| Rs. 200 to 500 | — | 43.4 | 43.4 | 50.0 | 2.5 bighas to 25 bighas |
| Rs. 500 to 1,000 | 31.0 | 50.0 | 70.0 | 50.0 | 10 bighas to 32 bighas |
| Rs. 1,000 and above | 42.0 | 21.0 | 75.0 | 68.0 | 15 bighas to 100 bighas |

Source : Survey conducted by the author.

Notes

1. Jatindra Chandra Sengupta, *West Bengal District Gazettters : Malda District, 1969*. p. 229, Government of West Bengal, Calcutta.
2. *Ibid*, p. 58.
3. Francis Buchanan (Hamilton), *A Geographical, Statistical and Historical Description of the District, or Zilla of Dinajpore, in the province, or Subbah, of Bengal*, Calcutta, 1833.
4. Government of West Bengal, *Settlement Report on Malda, 1938*, p. 110.
5. Ashis Bose, 'Six Decades of Urbanisation in India, 1901-1961', M.S.A. Rao (ed.) *Urban Sociology in India*; New Delhi, 1974.
6. W. W. Hunter, *A Statistical Account of Bengal*; Volume VII, District of Maldah, Rangpur and Dinajpur, pp. 100-102, London, 1877.
7. Census of India, 1971, Series 22—West Bengal; *District Census Handbook : Malda District, Calcutta, 1976*.
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9. *Ibid*, p. 94.

GHATAL : A CASE STUDY OF A RURAL TOWN

Sachinandan Sau

Ghatal municipality under Ghatal subdivision is the biggest urban area in the north-eastern part of Midnapore district. With a population of 35,438 (1981 Census) Ghatal ranks fourth after Kharagpur, Midnapore and Contai.

A Brief History of the Development of the Town

Ghatal is not as ancient a town as Tamluk. Its history of growth can be traced from the old days of Raja Subha Singh (1696 A.D.) who ruled as an overlord or a feudal chief of the West. Soon after the East India Company was established in Bengal, a silk factory (Resham Kuthi) was opened in this town on the bank of river Silabati. An indigo factory was also established at Nimtola which lies on the outskirts of this town. In addition, cotton-cloth industry and manufacture of bell-metal utensils flourished here. The weavers of cotton cloth worked on a system of advances from merchants. The products made here were mostly of a common quality, which were cheap but durable. Silk cloth manufactured at Ghatal was exported to Calcutta and other places. Though the fabric had not the same reputation as that of Murshidabad,¹ it was cheap and of reasonably good quality. The manufacture of brass and bell-metal utensils, such as cups, plates and cooking pots was better organized at Ghatal (and also at Kharar) than at any other part of the Bengal Province. The master craftsmen were enterprising and wealthy, who obtained the material in economically large quantities, e.g., tin from the Straits Settlements, copper from Japan, etc. and sold to Bara Bazar in Calcutta, where their supplies had a steady demand.²

With the establishment of these factories the growth of Ghatal was assured. It began to flourish as a market centre and gradually become the focus of activities in the western part of today's West Bengal, i.e., the northern part of Midnapore, Purulia and Bankura

districts and eventually obtained the status of a municipal town in 1869.

Demographic Growth

The first population figure for the town recorded in 1872 census was 15,492. The figure declined to 14,525 in 1901 and further to 10,770 in 1921. Thereafter, the population curve shows an upward trend. In 1951 Census, population was recorded as 16,125 which rose to 21,062 in 1961 and further to 27,570 in 1971.

The net decrease of population of Ghatal by 16.94% during the decade 1901 to 1911 was attributed to a series of cholera and small-pox epidemics in 1901, 1906 and 1907 and above all to malaria fever. These epidemics also continued during 1911 to 1921, when the population was further decreased by 10.73%. Besides, natural calamities like heavy rainfall, floods, draught, etc. played havoc and led to the fluctuations in the population of this town.

Since 1931, the population of Ghatal recorded a steady increase and experienced a rapid rise from 1951. It is learnt from senior citizens of Ghatal Municipality that about 100 families consisting about 500 members migrated to this town during 1950's from the erstwhile East Pakistan. Besides, about 20 families consisting about 120 persons migrated to this town from Bihar and Orissa for trade purposes. A small number of tribal families (4-5 families) migrated to live permanently here. Some outmigration also occurred, but their number was small (about 50 families consisting of 250 persons).

Explanation of Growth

As noted above, silk was an important industry and trade item of Ghatal town. 'Silk Kuti' was constructed by an Englishman on the bank of the Silabati. This 'Kuti-bari' formed the nucleus around which the present town has gradually developed. The culture of silk worms in the surrounding areas and also the facilities of river communication led to the growth of silk industry and trade at Ghatal. Ghatal was connected with Calcutta by a daily service of steamers. The steamers proceeded ordinarily to Ranichak on the Rupanarayan whence the journey to Ghatal was made by boats. Boats generally carried vegetables, rice etc. from rural areas to Ghatal. On an average, 40 boats used to call at Ghatal, in a day. Silk and water transport favoured the growth of other industries e.g., cotton cloth, brass and bell-metal.

In recent years, land transport has become more important. Different road development schemes of the first three five year plans

have made Ghatal one of the cross-centres of the regional and inter-district trade and traffic routes. The construction of the Ghatal-Panskura Road started in 1951 and was commissioned in 1955-56. The opening of the Rupanarayan road bridge has led to manifold increase in the traffic of this road. At present about 15 trucks operated here daily. Ghatal town is now well connected with Calcutta, though one has to traverse 22 miles on road and 43 miles on railways to reach Calcutta from this town.

Ghatal P.S. (Police Station) and neighbouring areas having a surplus in agriculture production, it has led to the growth of commerce, trade and other services in this town. The State Bank of India, United Bank of India and United Commercial Bank have their branches at Ghatal, as also Tamluk-Ghatal Central Co-operative Bank, People's Cooperative Bank and Land Mortgage Bank. Being an important sub-division town, a large number of Government offices have been opened here.

Cultural and educational factors also contributed to the growth of the town. Ghatal Vidyasagar School was established in 1882. A Girls' School came later. Ghatal Rabindra Satabarsiki Mahavidyalaya was set up in 1961. Medical services of the town improved greatly with the opening of Ghatal Sub-divisional Hospital.

All these factors contributed to the rapid increase in the population of this town. In recent years there has been a relative decline of the industrial sector, but increase in trade and agricultural activities have contributed substantially to its growth.

Occupational Pattern

Ghatal being now a centre of trading mainly in agricultural inputs, commodities, it is natural that most of the workers would be engaged in the tertiary sector and primary activities. Census data for 1961, 1971 and 1981 show this (See Table 1).

We see from Table 1 that, in 1961, 46.5% of the total workers were employed in the tertiary sector (i.e., trade and commerce, transport and other services) and 38.36% in primary activities (i.e., agriculture, as cultivators and agricultural labourers); while household and non-household industries could absorb only 13% of the total workers. The 1971 data show a different picture. We see that the absolute size of the tertiary sector has remained stagnant and the absolute number of workers employed in household and non-household industry has declined. It indicates that with the rise in the number of total workers, the relative importance of these two

sectors in respect of employment has fallen. On the other hand, primary activities have absorbed a larger percentage of workers—more than 48% in 1971 as against 38.4% in 1961. Another important, related feature, is that the number of agricultural workers has rapidly increased from 810 in 1961 to 1,216 in 1971—the steep rise of 50%, while the growth of workers during the period 1961-71 has been only 18.1%. This shows a picture of increasing misery and poverty of the population of Ghatal. Over the longer span of time 1961-81, the number of agricultural labourers has increased from 810 to 1634 a steep rise of more than 100% while the growth of workers during this period has been only 64%.

There has, however, been a large expansion of transport (including storage and communication) business and some growth of trade and commerce activities, as indicated by an increase in number of workers there. But there had been, as noted earlier, an absolute decline in the number of workers in 'other services' during 1961-71. This decline in the size of 'other services' in the perspective of increasing number of workers has boosted up the informal sector. It is estimated that some 200 'gumties' (unauthorized sheds for business purposes) have sprung up on encroached pavements and road-sides and some 500 to 600 persons are engaged there. They formed about 7% of the workers in 1981.

Linkages with the Rural Hinterland

Since Ghatal is now mainly a primary-activity-based municipality, trade and commerce being next to primary activity in importance, its linkages with the rural hinterland are mainly in terms of the distribution of agricultural inputs like fertilizer, pesticides, financial resources as well as daily necessities like grocery, cloth, etc. Data on the actual quantum of the flow of these physical goods are not available, but indications are that some 10,000 metric tons of fertilizers are supplied to the rural economy of Ghatal sub-division for both boro and aman cultivation of paddy and for the cultivation of vegetables etc. The amount of the flow of financial resources can, however, be estimated. According to the 1971 Census, Ghatal municipality had 5 banks, 3 agricultural credit societies and 6 non-agricultural credit societies. The State Bank of India is the major bank here and Tamluk-Ghatal Central Cooperative Bank is the apex cooperative body. The volume of short-term advances made by these two banks for different agricultural purposes are shown in Table 2. The short-term advances made by the former are for aman.

potato and boro (HYV). cultivation, while the latter's advances include also power tiller advances, and advances for poultry, milch cattle, draught cattle and fishery. The amount of advances made by the former constitute about one hundred per cent of its total advances for the year while that by the State Bank of India forms only 19.27% of its total advances.

Besides, the Tamluk-Ghatal Cooperative Bank has advanced during August 1981 Rs. 1.857 lakhs to 583 Scheduled Caste and Scheduled Tribe bargadars under its Special Component Plan. Normal financing to bargadar during this month was Rs. 3.079 lakhs for 385 bargadars.

All these flows of financial and physical resources as well as of consumption goods have their considerable impact on the rural economy in terms of changes in rural occupational structure, cropping pattern and the growth of non-agricultural activities, as well as the modernization of agriculture. Ghatal being a flood-affected area, the boro crop is very important for its agricultural economy, and here boro advances and the adequate supply of fertilizers etc. lead to the large production of HYV paddy. Multiple cropping has been possible. Besides, all these flows have helped the growth of petty trade and business activities in the rural areas and thus helped the growth of some diversified occupational structure in the erstwhile static rural society.

Dependence on the Metropolitan City

Calcutta, the state headquarters as well as metropolitan city, is at a distance of only 65 kms. from this sub-divisional headquarters town of Ghatal, shorter than the 103 kms. distance between district headquarters at Midnapore and this town. Besides, this town being an important trade centre well connected with Calcutta by road, inland waterways and road-cum-railways, its dependence on this metropolitan city is very high. This dependence is shown in terms of migration (both for job and for education), movement of goods and flow of in-and-out remittances. About 600 persons (about 2% of the total population of this town in 1981) migrate to Calcutta for job and education. Grocery, machinery, fertilizers and pesticides etc. are imported from Calcutta. Ghatal exports jute, potato, rice, bell metal utensils, butter etc. The volume of in-and out-remittances is naturally considerable, though no firm estimate is available.

The Role of the Town in the District/Region

Ghatal being a market town, its role in this region or district is important. It has led to the considerable growth of population of this

town in the post-independence period. The density of population is higher than the figure in most other towns of Midnapore. According to the 1981 Census, population of Ghatal per square km. was 3,420 which is higher than 2,874—the average density of urban population in Midnapore district as a whole. While Ghatal has been able to maintain its rate of urbanisation (measured in terms of growth of population) more or less at a moderate pace, other municipalities in this Ghatal Sub-division—namely Kharar, Khirpai, Chandrokona and Ramjibanpur have showed rather slow growth (See Table 3). As against the growth of population of 89% at Ghatal municipality from 14,525 in 1901 to 35,433 in 1981, Kharar's population declined absolutely from 9,508 to 9,471 over this period. The growth of urban population at other municipalities, though positive, is lower than that of Ghatal. Several reasons are attributed to this. Other municipalities have lost much of their trade and commerce on account of the decline of their traditional household industries, namely bell-metal utensils, cotton cloth, etc. These latter municipalities have now become only service towns; trade and commercial activities having declined. On the other hand, Ghatal, in addition to being a trade centre, is a sub-divisional headquarters, which has encouraged developmental economic activities in this town.

The Class Formation in the Urban Area

In the urban core sector, there are mainly two classes—trading class and day labourers, while in the urban periphery land owners and agricultural labourers form the two main economic classes. Since a significant percentage of the urban population (about 21% as noted earlier) belongs to scheduled castes and scheduled tribes, the supply of daily labourers is abundant and most of them commute to the core business sector of Ghatal town to work.

Trading relationship exists between traders in the urban area and the rural petty tradesmen, transactions being mainly in agricultural goods and inputs, and also in some manufactures.

Financial and Administrative Issues

The major problem facing this municipality is the lack of adequate finance. The resources are limited and inelastic, and again there is the failure to collect the taxes assessed. As is evident from Table 4, tax revenue constituted only 5.5% of total receipt in 1979-80, while government grants formed 90.9%. Total receipts during the period 1961-62 to 1979-80 increased 20.6 times but tax revenue increased only 1.8 times. This semi-stagnancy of tax resources is a reflection of

the stagnation of the economy and increasing poverty of the growing urban population. The standard of municipal services provided to urban population has been poor. For, instance, per capita expenditure on public utilities (namely, water supply, conservancy, etc.) at Ghatal municipality in 1978-79 was Rs. 70/- as against Rs. 86/- at Kalyani Notified Area. In 1976-77, per capita total expenditure of Ghatal municipality was only Rs. 23/- while that of Faridabad municipality (Harayana) was Rs. 145.85 (NCAER 1980)³. The supply of drinking water to inhabitants is through tubewell, since there is no piped water supply. Head load is the only method of disposal of night soil. Financial inadequacy is the root cause of all these deficiencies.

There are also administrative issues. The absence of an efficient and well-trained staff in the municipal administration has stood greatly in the way of the achievement of the desired results and better services to the town population.

The excessive dependence on external sources of revenue (i.e., Government grants) is a bane on the development of proper planning and execution and maintenance of developmental schemes. As Government grants are given on an ad-hoc basis complexities arise both in the planning and in the decision-making stages. All these problems hamper proper development of public utilities at the municipality.

Summary and Concluding Observations

Ghatal is a sub-divisional town and trading centre of considerable importance. In the pre-independence period, the growth of silk industry, cotton cloth, bell-metal utensils industries and riverine location helped the development of trade and commerce of this town. In the post-independence period, road development measures and agricultural development schemes have helped its growth. It is now the third largest town of Midnapore district. But Ghatal is economically backward. Its trade mainly consists of agricultural goods and inputs. Financial stringency affects the volume and quality of services of the municipality. All these point to the need for restructuring the town economy and also the method of resource mobilisation for the municipality.

Table 1
Occupational Pattern at Ghatal Municipality during
1961-1981 (Number of Workers)

| Sl. No. | Year/Occupation | 1961 | 1971 | 1981 |
|---------|--------------------------------------|---------------|---------------|--------------|
| (1) | (2) | (3) | (4) | (5) |
| 1. | Cultivator | 1,297 (23.6) | 1,906 (29.4) | 2143 (23.7) |
| 2. | Agricultural Labourer | 810 (14.7) | 1,216 (18.7) | 1634 (18.1) |
| 3. | Livestock, Mining etc | 36 (0.6) | 14 (0.2) | - - |
| 4. | Household Industry | 216 (3.9) | 137 (2.1) | 347 (3.8) |
| 5. | Other than Household Industry | 498 (9.1) | 555 (8.6) | - - |
| 6. | Construction | 81 (1.5) | 109 (1.7) | - - |
| 7. | Trade and Commerce | 1,193 (21.7) | 1,218 (18.8) | - - |
| 8. | Transport, Storage and Communication | 97 (1.8) | 192 (3.0) | - - |
| 9. | Other Services | 1,264 (23.0) | 1,139 (17.6) | - - |
| | Total Workers | 5,492 (100.0) | 5,492 (100.0) | 9027 (100.0) |

Note : Figures in brackets indicate percentage share to total workers.

'-' denotes figures not available.

Source : Government of India, Census, West Bengal, 1961, 1971, 1981, General Population Tables.

Table 2
Volume of short-term Advances made by Tamluk-
Ghatal Central Co-operative Bank and State Bank of
India for rural purposes (Amount in Rs. Lakhs)

| Sl. No. | Name of Bank | Reference Period | Volume |
|---------|---|------------------------|--------|
| 1. | Tamluk-Ghatal Central Co-operative Bank | July 1980 to June 1981 | 43.75 |
| 2. | State Bank of India | Calendar Year 1980 | 1.99 |

Source : Offices of the Tamluk-Ghatal Central Cooperative Bank and State Bank of India, Ghatal Branch.

Table 3

Demographic Growth at Ghatal vis-vis at Kharar, Khirpai and other municipalities of Ghatal Sub-division

| Year | Ghatal | Kharar | Khirpai | Chandrakona | Ramjibanpur |
|------|--------|--------|---------|-------------|-------------|
| 1901 | 14,525 | 9,508 | 5,046 | 9,306 | 10,264 |
| 1941 | 17,226 | 5,570 | 3,623 | 6,411 | 6,036 |
| 1951 | 16,125 | 5,023 | 4,246 | 5,717 | 7,539 |
| 1961 | 21,062 | 5,909 | 5,803 | 7,383 | 7,621 |
| 1971 | 27,570 | 7,262 | 7,075 | 9,811 | 10,364 |
| 1981 | 35,433 | 9,417 | 8,369 | 13,406 | 12,309 |

Source : Government of India, Census, West Bengal for various years.

Table 4

Item-wise Receipts and Expenditures of Ghatal Municipality (Amount in Rs. '000)

(A) Receipts

| Year | Tax revenue | Revenue from properties and others apart from taxation | Government grant | Loans and advances | Other sources | Total |
|---------|-------------|--|------------------|--------------------|---------------|--------|
| 1961-62 | 56.5 | 3.2 | 16.9 | — | 11.8 | 88.5 |
| 1964-65 | 66.5 | 4.5 | 132.6 | — | 7.7 | 211.3 |
| 1966-67 | 61.1 | 5.0 | 44.4 | — | 3.5 | 114.0 |
| 1972-73 | 78.8 | 2.7 | 409.2 | 1.8 | 0.2 | 492.7 |
| 1975-76 | 100.1 | 6.6 | 510.9 | — | 0.2 | 617.8 |
| 1977-78 | 88.1 | 7.5 | 757.4 | — | 2.0 | 853.3 |
| 1978-79 | 65.4 | 6.7 | 2,703.1 | — | 23.6 | 2798.8 |
| 1979-80 | 100.1 | 7.3 | 1,657.4 | — | 57.9 | 1822.8 |

Table 4 (Continued)

(B) Expenditure

| Year | Public health and convenience | General administration | Education | Water supply | Lighting | Others | Total |
|---------|-------------------------------|------------------------|-----------|--------------|----------|--------|---------|
| 1962-63 | 10.9 | 9.2 | 7.9 | 3.7 | 4.7 | 58.3 | 94.8 |
| 1964-65 | 33.9 | 15.8 | 9.7 | 5.1 | 6.1 | 33.2 | 103.7 |
| 1966-67 | 36.1 | 15.9 | 16.2 | 10.7 | 8.7 | 51.1 | 138.8 |
| 1972-73 | 76.5 | 39.5 | 490.9 | 44.5 | 6.9 | 157.9 | 516.1 |
| 1975-76 | 88.1 | 37.4 | 287.3 | 9.6 | 10.0 | 149.9 | 582.4 |
| 1977-78 | 139.8 | 61.1 | 333.7 | 23.6 | 13.9 | 174.1 | 785.3 |
| 1978-79 | 178.9 | 88.6 | 484.0 | 90.2 | 17.2 | 148.9 | 2,338.4 |
| 1979-80 | 176.6 | 82.7 | 513.4 | 51.2 | 20.4 | 587.1 | 1,431.3 |

Source : Office of the Ghatal Municipality.

Notes

1. N. G. Mukherjee, *Monographs on the Silk Fabrics of Bengal*, pp. 3-10, 31-44.
2. *Bengal District Gazetteers*, Midnapore, 1911, pp. 124-26.
3. National Council of Applied Economic Research, (N. C. A. E. R.), *A Study of the Resources of Municipal Bodies in India*, Delhi, 1980.

CALCU

U

URBAN UNITS

HOOGHLY DIST

1. Bansbaria
2. Hooghly - Chir
3. Chandannagar
4. Bhadreswar
5. Champdani
6. Baidyabati
7. Serampur
8. Rishra
9. Konnagar
10. Uttarpara-K

HOWRAH DIST

11. Howrah M.C.
12. Uluberia

NADIA DISTRI

13. Kalyani N.A.

WES

NEV

Kms.50 40 3



26°N

LEGEND

NEW TOWNS
INTERNATIONAL
STATE BOUNDARY
DISTRICT BOUNDARY

LALBAZAR
• PETANA PAR
• RAMNAGA
• SHITALPUI
CHINAKURI

WES

LOW

50

E

LEGEND

DISTRICT I

STATE E

INTERNATIO

DISTRICT

TOWN

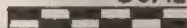
POPULATIO

10,000

WEST AFRICA

HIGH GROWTH

SCALE



Kms 50 40 30 20 10 0

26°N

LEGEND

INTERNATIONAL BOUNDARIES
STATE BOUNDARIES -
DISTRICT BOUNDARIES

POPULATION



ABC
5000
2000
1000